



Master's Thesis  
Division of Urban Geography and Regional Studies  
Urban Geography

INTERGENERATIONAL PUBLIC NEIGHBOURHOOD SPACES:  
AGEING IN PLACE IN TIONG BAHRU, SINGAPORE

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| <p>Tiivistelmä/Referat – Abstract</p> <p>This research was situated in Tiong Bahru, a neighbourhood located in Singapore. The neighbourhood was selected because it has one of the highest proportions of residents who are ages 65 and above. Besides that, it was selected because of its status as a historically 'conserved' estate, with guidelines imposed on residents living there to preserve the historical look of the built environment. Furthermore, the fact that it is promoted as a tourist destination and its proximity to the downtown contributes to urban regeneration and a new wave of expatriate residents that moved in in recent years. Thus, by basing its conceptual frameworks on place, sense of place and intergenerationality, it explores the contributions of the elderly residents to their neighbourhood and why elderly residents continue to age in place in Tiong Bahru. By subscribing to the ontogenetic thought of space- where space is constantly in the process of change- it also points out the public neighbourhood spaces of interaction. Space syntax is also used to investigate how the built environment affects the establishment of intergenerational relationships between the elderly and younger residents.</p> <p>The data was collected using a triangulation of methods- static snapshot observation, observation, participant observation and semi-structured interviews. The qualitative data collected is then coded using Atlas.ti, while the static snapshot observations were then compiled and compared to the analyses, VGA, axial analysis, and agent simulations produced by DepthMapX. The research firstly challenged the idea of the public/ private dichotomy as it was observed that some residents had their own private territories in public spaces, and there were alternative spaces where residents interacted with each other in. The analysed qualitative data showed the contestations between new foreign residents and the elderly. It also explained the reasons the elderly continued to stay in Tiong Bahru- mainly because the established friendships and community enables the elderly to feel a sense of place in the neighbourhood. From the comparison of discrepancies between the static snapshot observations with the space syntax analyses, it is evident that a built environment with high visibility and orientability can only affect intergenerational interactions to a limited extent- by increasing the accessibility and thus enabling higher awareness of a public space. Combining space syntax analysis with the qualitative data, it was thus concluded that to facilitate intergenerational relationships, public neighbourhood spaces should also have activities or events in order to encourage more intergenerational interactions between residents who are initially strangers. Overall from the discussion chapters, this thesis thus supports the idea that establishing intergenerational ties within the neighbourhood community is one of the solutions to promote inclusivity and hence prevents contestations in public neighbourhood spaces.</p> |  |                                                                            |                                               |
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Lim Yew Chen, October 2017

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# **1 Introduction**

## **1.1 The Ageing Population in Singapore**

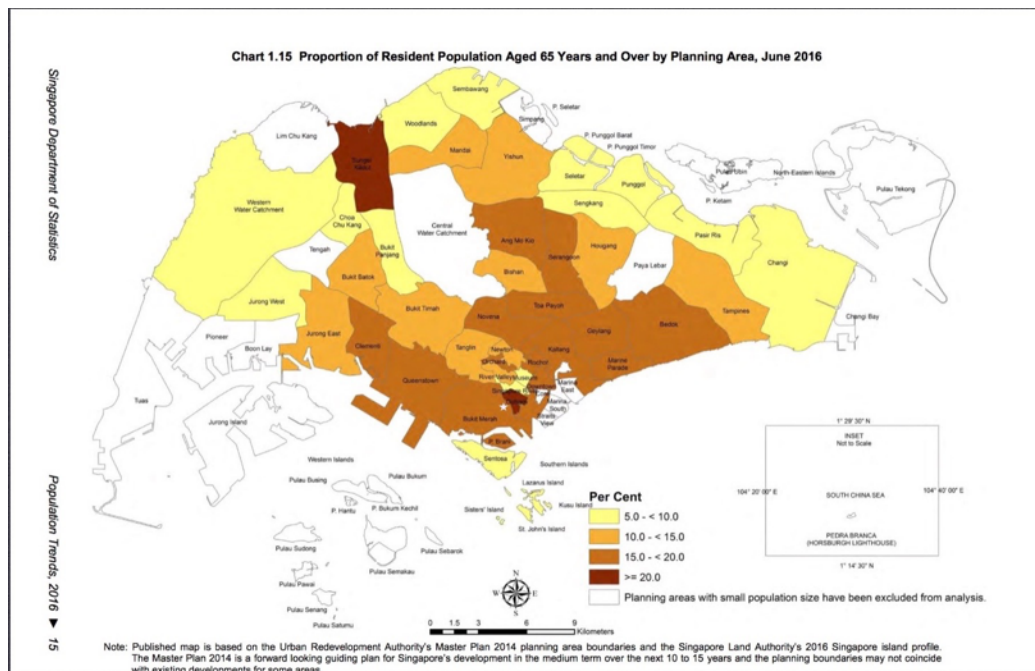
The rapidly ageing population is one of the burgeoning issues in Singapore, where 12.4 per cent of the residents are aged 65 years and over in 2016, a rise from 11.8 per cent in 2015 (Singapore Department of Statistics, 2016). It is also projected by the Singapore Department of Statistics that the proportion of the elderly will rise to 18.7 per cent in 2030 (Yap and Gee, 2015). The ageing population trend is apparent because the decreasing fertility rates and the decreasing mortality rates in the population mean that the proportion of older people has increased in relation to the younger people (Timonen, 2008). The ageing population has become a widely discussed issue during policy planning due to the need for policy changes in order to cater to an ageing society. One of the discussed issues is the slowdown in economic productivity because the Old Age Support Ratio in Singapore, has declined from 5.7 residents aged 20-64 years, for each resident that is 65 years and older, in 2015 to 5.4 residents at the end of June 2016 (Department of Statistics Singapore, 2016). Besides having a smaller workforce in comparison to the ageing population, it is likely that the working age population will also provide private emotional care to the ageing population, thereby incurring adverse health consequences for themselves in the long run (Yap and Gee, 2015). The increasing longevity of the ageing cohort in Singapore also means that either the family or elderly will need more finances to fund their poor health (Yap and Gee, 2015), since the ageing body will increasingly become more vulnerable across the years. An increasing longevity would also mean that healthcare institutions have to modify its services and facilities in order to accommodate more patients such as increasing the number of hospital beds, and more specialised services.

The equivalent of a pension scheme in Singapore is the Central Provident Fund (CPF) system, a compulsory social security system that enables working Singapore Citizens and Permanent Residents to set aside funds from their monthly salary. These funds comes with interests rates and can be used for housing, medical purposes over the life course, and mainly to ensure that retired Singaporeans have enough funds to last through their retirement (CPF, 2016). However, even though the CPF system is comprehensive and covers the basic needs of Singaporeans, some disabled persons, women who have lower education levels in the past or whom chose to stay at home, or the self-employed who seemingly did not contribute to the

growth of Singapore's economy are not privy to this means of financial support, or information on how to get financial support. This is shown in the statistics that one in five men and one in three women do not have CPF coverage, while one in four who have CPF are unable to cover for an adequate retirement (Phua, 2002). This inability to have adequate retirement funds from CPF will then affect the 'sandwiched' generation who not only shares their parents' finances in healthcare but also are responsible for providing for their children's needs. Over the years, as the families get smaller, children have lesser people to share the costs of their parents' health care and daily needs, meaning they have to pay more (Yap and Gee, 2015).

## **1.2 Situating the research in Tiong Bahru**

This research will be looking at a particular neighbourhood in Singapore called Tiong Bahru. Based on the 2014 Masterplan, Tiong Bahru is a sub-zone that is located within the Bukit Merah Planning Area, which is located within the Central Region of Singapore (Urban Redevelopment Authority, 2016). From Figure 1.1, Tiong Bahru (marked with a white star) also borders on the Outram Planning Area (dark brown zone in the south). The main reason that this paper chooses to focus on this particular sub-zone is because it is an area that has a larger than average proportion of elderly residents (Kong et al., 1996). Tiong Bahru is also located within or near planning areas where at least 19.2% of the residents are 65 years and over, as seen in Figure 1.1.



**FIGURE 1.1 TIONG BAHRU NEIGHBOURHOOD IN SINGAPORE. SOURCE: DEPARTMENT OF STATISTICS SINGAPORE (2016).**

The neighbourhood is marked with a white star.



**FIGURE 1.2 CONSERVATION AREAS IN TIONG BAHRU. SOURCE: URBAN REDEVELOPMENT AUTHORITY, SPACE, 2016.**

Conservation Areas marked in Pink.

Besides the fact that Tiong Bahru is located within or beside areas that have a high proportion of residents that are 65 years and above, another reason for choosing Tiong Bahru as a study area is because a specific portion of Tiong Bahru is declared a 'conserved secondary settlement' by the Urban Redevelopment Authority (2011) in Singapore since it is Singapore's third and largest public housing project that is built by the now non-existent Singapore Improvement Trust (SIT) built between the 1930s and 1950s to solve housing shortage and squalid living conditions that dominated the Singapore urban landscape (National Heritage Board, 2013). Furthermore, it features the distinctive architectural and town planning that were prevalent in British public housing then (National Heritage Board, 2013; Urban Redevelopment Authority, 2011). From Figure 1.2, it is evident that the Tiong Bahru conservation area is bounded by Outram road, Seng Poh Road, Yong Siak Street and the Central Expressway. The SIT Blocks that are to be conserved are as follows: 55 to 59, 64 to 66, and 71 to 82. The conservation rules for house owners are stringent as they include specific rules to keep the same proportion and similar materials for windows. House owners are also not allowed to modify the facade of the buildings with the removal of vents or additions of air-condition units, awnings or plant tracks (Urban Redevelopment Authority, 2013).

With strict conservation rules in place to maintain the facade of this conserved estate, the SIT apartments are also currently not fitted with lifts, and still look similar to how they were when first constructed. With a distinctively ageing community in the neighbourhood, the strict conservation rules may impede the elderlies' negotiation with space- the most notable example being that walking up the steep stairs, unexpected corners and spiral back steps are getting increasingly harder for the ageing (Kong et al. 1996). Another example includes the seniors' deteriorating eyesight over the years that may make it harder for them to go out alone at night, thus potentially missing out on social opportunities. However Kong et al. (1996) also states that the elderly in Tiong Bahru are still able to overcome their deteriorating bodies by strategising how to minimise efforts to complete a task in order to negotiate their everyday lives. Kong et al. (1996) also points out that although the elderly faces certain challenges with the conserved facades, the lack of changes allow them to retain their intimate recollections of the space, and establish a sense of place and "physical inside-ness" within the community over the years. The seniors also negotiate the space through their daily established rituals such as taking leisurely strolls, gathering at coffeeshops or other open, available spaces to chat with

their neighbours, going to the market, and reading the newspaper at the reading corner in the neighbourhood's community center. Organisations within the neighbourhood also play a strong role in fostering the community bonds for the elderly by organising outings and block parties. Lastly, due to the sense of belonging that the elderly residents feel being in the space of Tiong Bahru, they are able to take up positions to volunteer in the Residents' Committee (RC) to contribute to their community. This allowed the other younger residents to be aware of their presence and foster a relationship with their elderly neighbours based on trust and familiarity (Kong et al., 1996).

However in recent years, Tiong Bahru is no longer the neighbourhood that has the reputation as the "ageing community" where "usually you don't see many young faces" (Kong et al., 1996; p. 536) This is because the conservation process has also brought about several urban regeneration projects, such as the increasing number of pricey cafés such as P.S. Cafe, Plain Vanilla and specialty shops such as Books Actually. This lifted the reputation of Tiong Bahru from being one merely a maturing, and ageing estate to becoming an estate known for its own quirks charms (To et al., 2014). Not only has Tiong Bahru become a hotspot and trending place that appeals to the youthful 'hipsters' crowd (Chua et al., 2014), it has also been recently marketed as a tourist site due to its 'rich heritage' in its architecture and 'charms' (Your Singapore, 2016). This has caused Tiong Bahru to be cast in the spotlight for the housing market where newer constructions have been built or currently being built next to the conserved SIT blocks. This once again changes the demography of the neighbourhood, with more younger faces (To et al., 2014) and expatriates that have moved or will be moving into the neighbourhood. Hence this research is interested in looking at how public neighbourhood spaces have been or can be established in the Tiong Bahru estate in order for the elderly to establish intergenerational bonds between residents. This enables the elderly residents to continue retaining their sense of belonging and contribution within the neighbourhood.

### **1.3 Thesis Scope: Research Aims and Contribution to Literature**

One of the main themes that urban geography seeks to answer is the regulation and negotiation of urban spaces (Buffel and Phillipson, 2015). While this theme expands out to many questions, this research intends to mainly focus on the relationship between urban design and social behaviour; how different populations make use of urban spaces; and how



sense of place is generated within the city, (Pacione, 2001; 13-16). One of the pertinent challenges globally include being unable to meet the needs of the urban ageing population due to the disconnect between developer's goals i.e. generating money, and the urban elderlies' needs. These needs include being able to utilise and enjoy the public neighbourhood spaces (Zukin, 2010; Gardner, 2011; cited in Buffel and Phillipson, 2015). Due to the disconnect, it challenges the current social, political, economic and spatial structures (Buffel and Phillipson, 2015), especially so with the rapidly increasing ageing demographic in Singapore. This research thus choose to combine the themes in urban geography with the sub-discipline, geographies of ageing- where the relationship between spaces, places and ageing identities will be explored (Vanderbeck and Worth, 2015). As current policies targeting urban issues are becoming increasingly obsolete with the pressing issues of the increasing ageing population and urbanisation, newer ideas that encourage the practice of 'intergenerational spaces' and 'ageing in place' begin to emerge both within the fields of ageing studies as well as urban planning (Buffel and Phillipson, 2015).

As the themes and questions from both urban geography and ageing studies are broad, this thesis intends to contribute to the gaps in the body of geographies of ageing and intergenerational literature firstly by basing intergenerational research on the theoretical framework of space and place (Melville and Hatton-Yeo, 2015). More specifically, space syntax will be incorporated as an analysis method to better understand how built space and social interactions influence each other (Melville and Hatton-Yeo, 2015). Secondly, the research is carried out in Tiong Bahru, a neighbourhood in Singapore. By focusing on the mesoscale i.e. concerned with communities of individuals (Kaplan and Haider, 2015), it contributes to the lack of literature that reflects intergenerational trends in the neighbourhood scale (Pain, 2005). Thirdly, this thesis also describes the intergenerational interactions, which tends to be ignored in intergenerational research (Melville and Hatton-Yeo, 2015). Lastly, this thesis will not only see the need for the elderly population to feel a sense of place, but also explore the elderly's role as a contributor to their neighbourhood community. Thus in order to contribute further to the literature in geographies of ageing, this research aims to address the following questions:

- 1) Where are the public neighbourhood spaces in Tiong Bahru community that fosters (intergenerational) interactions between the elderly residents and other residents?

- 2) Do the elderly residents feel a sense of place within Tiong Bahru? How do they participate within or contribute to the community?
- 3) Are there any interaction between different generations in the public neighbourhood spaces in Tiong Bahru? How does the built environment affect intergenerational interactions between the residents?

## **1.4 Organisation of Thesis**

This thesis will first present the theoretical and conceptual frameworks that the research is based on. This will justify the literature that is presented as well as the methods used. Chapter 2 also reviews the existing literature and concepts of ageing geographies and the intergenerational studies such as ‘ageing in place’ and ‘intergenerationality’. By doing so, it identifies the gaps in the literatures, and the flow of argument justifies the research aims and framework. Chapter 3 describes and justifies the data collection and analysis, essentially the use of triangulation in data collection, the ethics that the research adheres to, as well as using coding and space syntax as data analysis tools. Chapter 3 also includes a reflexivity section that enables a better understanding of how data is perceived during collection, and also the crossing of generational boundaries by the researcher in the field. Chapter 4 presents a summarised version of the results from the observation, interviews and static snapshot methods. Chapters 5, 6, 7 and 8 are broken down into conceptual themes and discusses the analysed data. Chapter 5 challenges the dichotomy between public and private spaces, and identifies the different public neighbourhood spaces that the residents would choose to interact in Tiong Bahru. Chapter 6 presents the space syntax analysis of the public spaces in Tiong Bahru and compares them with the collected data in order to determine how much the built environment has an effect on intergenerational interactions in the neighbourhood. Chapter 7 explores why the elderly demographic continue choosing to age in place in Tiong Bahru despite the difficulties in negotiating their environment caused by the lack of lifts in a conserved, regenerated neighbourhood. It also presents the tight community and friendships forged between neighbours. Chapter 8 discusses the intergenerational relationships that exist and how it can be established in the neighbourhood. It also presents the contestations of public space between generations in the neighbourhood. Lastly, Chapter 9 concludes the thesis by summarising the discussion findings and re-emphasising their significance to the

conceptual framework and literature justification of this thesis. It also assesses its contribution to urban geography and gerontological studies, and suggests further research ideas.

## **2. Literature Review**

### **2.1 Geographies of Ageing**

The initial contributions to geography of ageing only started in the late 1970s. The themes then focused mainly on spatial and movement trends in population and ageing; thematic concentrations in the areas of health and caregiving, and environmental gerontology (Skinner et al., 2015). It was through the publishing of “Rethinking Geographies of Ageing” by Harper and Laws (1995) that pushed human geographers to contribute a geographical perspective to gerontology. Suggestions of contributions include going beyond the initial contributions in the 1970s and instead, integrating ‘current’ issues and approaches in both human geography and social gerontology such as feminism, postmodernism et cetera. This enables the reframing of ‘age’ as an independent variable (Harper and Laws, 1995) to one that is recognised as a fluid identity shaped by society (Pain and Hopkins, 2010). With the departure of Harper and Laws from the discipline, contributions to the discipline also subsequently lost its momentum and only has been revived and broadened recently (Skinner et al., 2015). The current research themes in Geographies of Ageing discipline looks mainly at ageing and place with the theoretical approaches that has been used in the broadening geographical literature like feminism, post-modernism and post-structuralism as Harper and Laws has suggested in 1995. These geographical frameworks are then merged with the the four different approaches i.e. accepting age as a biological or chronological given; forwarding age as socially constructed; retheorising the body; and interrogating being/ becoming competency, agency and resistance. It also addresses three conceptual frameworks that focuses on the relational and holistic analysis of geographies of ageing i.e. intergenerationality; intersectionality; and life course (Pain and Hopkins, 2010) which are based on gerontological perspectives (Hooyman and Kiyak, 2014), contributing to the burgeoning literature in the discipline.

The thesis will choose to approach age from a biological or chronologically given, and instead focus on the patterns and problems of social life through spatial patterns by intending to look at how elderly people, aged 65 and above, negotiate within their neighbourhood environment and integrate with other generations in their neighbourhoods (Pain and Hopkins, 2010). The

thesis will also base its conceptual framework on intergenerationality which looks at the interactions between generations. By looking at the how interactions shape how both public and private spaces are being used or contested for (Pain and Hopkins, 2010), these interactions are also a glimpse as to how 'generations' is a fluid identity, and is shaped by space, time and cultures (Burnett, 2010; Hagestad and Uhlenberg, 2007). From the approach and framework of this thesis, this literature review will be written in the following order- first, defining the idea of 'space', 'public space' and the concept behind 'space syntax' i.e. the social logic of space focuses on the spatial patterning of society. Second, defining 'place' and 'ageing in place' explains the importance of community connections in order to ensure continuity in the life course for the elderly residents in Tiong Bahru. The thesis will then move on to defining 'intergeneration', and discussing the advantages and disadvantages of intergenerational spaces. Lastly, this paper will also discuss the literature gaps within the discipline and intergenerationality so as to justify the contribution(s) that this paper can make towards the geographies of ageing discipline. Through the discussion of the various key concepts that surrounds this paper, this thesis also acknowledges that age and life course stages are socially constructed ideas and that people can create and resist their age identities through their use of space and place (Pain and Hopkins, 2010).

## **2.2 Space and Place**

'Space' and 'Place' are both central concepts in geography (Cresswell, 2009; Elden, 2009). The distinction between 'space' and 'place' is that 'space' is viewed as the objective, scientific and mathematical descriptions of an area (Soja, 1980; Elden, 2009; Kitchin, 2009), while 'place' is tied to a person's experiences and emotions with(in) the environment (Tuan, 1974; Elden, 2009). In other words, spaces can become places for people as they experience and interact with(in) space (Tuan, 1974; Foote and Azaryahu, 2009). As noted by Vanderbeck and Worth (2015, p. 2), both 'space' and 'place'

“are not merely static arenas in which relationships between people transpire; rather, they are both constituted by and constitutive of social relations, including relations of age and generation.”

Besides providing a setting for particular activities and social relations to take place, the physical qualities such as the objective, i.e. size, land use, and perceived features, i.e. perceived safety or comfort, of the built environment also determines the social relations and behaviour in space. An example of such includes how the built up environment in urban space influences travel patterns (Kaplan and Haider, 2015).

### **2.2.1 Space**

‘Space’, or the terms related to it - ‘spatial’, ‘spatiality’ - are difficult to define because of its frequent, debatable yet barely defined use by geographers over the years (Elden, 2009). ‘Space’ is usually thought of as a container (Soja, 1980; Elden, 2009; Kitchin, 2009), but rather than that, Soja (1980) argues that space is created by society. Elden (2009) also states that many geographers such as Massey has argued that space not just filled with objects and relations but is ‘relational’ because it exists in relation to objects. Due to its relational nature, Massey argues that space should always be understood as being in the “process of making, never finished or closed” (Elden, 2009, p. 265). This section hence seeks to define ‘space’ — as used in this paper— by exploring its different definitions. This is done in order to make a necessary distinction between ‘space’ and other terms (Soja, 1980; Lefebvre, 1991). By considering the idea that space is made by society and vice versa (Soja, 1980; Elden, 2009), it enables the research to explore how built space affects the social interactions between generations, and ultimately provides recommendations to build more effective intergenerational spaces.

Kitchin (2009) breaks down the varying meanings of ‘space’ that are still used by geographers up till today into three different categories- absolute conceptions of space, relational conceptions space, and ontogenetic conceptions of space. Kitchin (2009) defines absolute space thought of as a container with no relation to society; relational space as the cycle where space is being (re)produced through social relations and practices and in turn, space then (re)produces social practices; lastly, ontogenetic space is where the form, function and meaning of space constantly change at varying speeds, and space is thus seen as a never-ending production due to social practices. From the definitions of varying use of ‘space’, this paper acknowledges the ontogenetic thought where spaces are (re)producing and changing at varying rates, especially since the area of study is a regenerated neighbourhood in Singapore.

To elaborate further on the ontogenetic thought, this paper takes on the view that spaces are endlessly remade and constantly re-territorialised due to the different usage of the same space by different individuals either at the same or different time since it is always being created (Kitchin, 2009; Sen and Silverman, 2014). The fluxes in space and time also shapes social relationships that happen within. This view is similar to embodied space, and Lefebvre's notion of 'social space' (Elden, 2009).

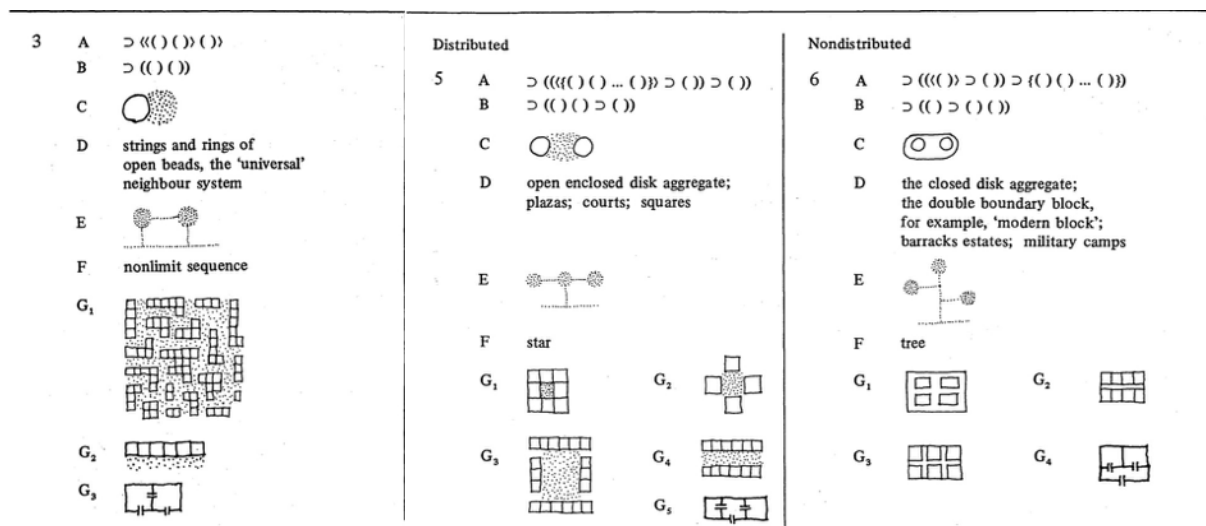
### **2.2.2 Space Syntax**

To enable visualisation of 'space' and social relationships, this paper will use space syntax as a method to investigate the spatial content of social patterning- essentially between the elderly living alone and intergenerational neighbourhood spaces within Tiong Bahru. Space syntax is a proposed conceptual model by Hillier et al. (1976) based on the social logic of space (Hillier and Hanson, 1984) that investigates the social content of spatial patterning and spatial content of social patterning (Hillier and Hanson, 1984). It represents, quantifies and interprets space and the social relations that happen with(in) (Hillier, Hanson and Graham, 1987). Besides investigating the social content of spatial patterning and spatial content of social patterning (Hillier and Hanson, 1984), space syntax also contributes to understanding of the laws that constitute the spatial structure. Combined with historical, social and geographical contexts (Hillier et al., 1976), space syntax can hence be used to study the social production of space i.e. architecture and settlement form.

To define and, thus, better understand what space syntax is, the word 'syntax' is defined by Hillier et al. (1976) as a set of objects, relations and operations that is capable of being combined to form a model. Space syntax is viewed as a morphic language- which means that there are rules to how objects, relations and operations can combine for a minimum setup. The minimum setup essentially consists of rules that generates patterns in space, and the patterns are dependent on the syntax (Hillier et al., 1976). This allows the model to be expressed in longer models and different categories, allowing for more variations and yet at the same time describing 'space' in a unified manner (Hillier and Hanson, 1984). Essentially, the morphic language of space syntax is made up of syntax and its rules, as well as a minimum setup - which consists of a space that can repeat pattern generation at random intervals, and minimal objects with minimal relations (Hillier et al., 1976). The fundamental theory that underlies

space syntax is that societies are built based on a collectivity that depends on a largely unconscious pattern (Hillier et al., 1976; Hillier and Hanson, 1984). This fundamental of space syntax strongly resonates with the non-representational theory by Thrift which states that spatial practices are generally habitual, unconscious and instinctive (Kitchin, 2009). The social logic of space also uses buildings to analyse spatial patterns because it postulates that buildings are transformation of space through objects (Hillier and Hanson, 1984). By basing space syntax fundamentally on these ideas, it recognises that space is related to society. This is stated by Hillier and Hanson (1984) that space is understood by first, the relations among occupants and second, relations between occupants and outsider. Hillier et al. (1976) also further states that it is possible to associate the space syntax model with the theory behind relational space.

Looking at the morphological archetypes of settlement patterns in Figure 2.1, spatial patterning does have effects on society, and vice versa. Hillier et al. (1976) investigates this by looking at both the social structure and morphological archetypes, where space plays an inverse role to the social structure. The small odd-numbered syntactic level are small and homogenous societies, e.g. tribe or village. The small even-numbered syntaxes are small and internally complex societies, e.g. a high rise estate. The big odd-numbered syntaxes are societies that are large and complex and the big even-numbered syntaxes are large and simple, lacking complex relations among members. Both the third and fifth syntaxes have close parallel relationships between both social and spatial structure (Hillier et al., 1976). The third syntax is described by Hillier et al. (1976) as a ‘multiplex’ where a person is likely to know and encounter another specific person for several different reasons. The multiple encounters results in the constant need for (re)-negotiations of identities. The fifth syntax is where buildings group around a central space. The third syntax is in contrast with the sixth syntax where it is orderly and segmented, every family and activity has its own space. This results in social encounters that are highly specific- where society and space constantly reinforce each other. The fifth syntax is where buildings group around a central space. Through the morphological archetypes, Hillier et al. (1976) proves that there is a relation between space and their social structures, where space could be either a representation, or in the case of the sixth syntax, where space is indeed a reflection of the current urban society.



**FIGURE 2.1 MORPHOLOGICAL ARCHETYPES AT 3 SYNTACTICAL LEVELS. SOURCE: HILLIER ET AL., 1976; PG. 176-7.**

The three syntactical levels are levels (a) 3, (b) 5 and (c) 6.

### 2.2.3 Limitations of and Justifications for Space Syntax

One of the critiques behind the space syntax theory is that it usually does not take human psychology into account when looking at spatial patterns in societies. This is however argued by Hillier and Hanson (1984) that it is not a theoretical starting point for the social logic of space because psychological theories tend to be theories of cultures or the individuals and how the environment affects the mind, rather than the social ordering of the physical environment. Another criticism of space syntax is the use of axial lines to represent space (Hillier, 1999). Ratti (2004) criticises that 1) the use of axial lines is not able to represent the complex geometry found in cities; 2) the axial line does not account for tall buildings and would cause an anomaly in the integration values; 3) the axial map also does not account for land use; 4) lastly, space syntax is unable to deal with regular grid planning in cities. Concerning critique number four, it was argued by Hillier and Penn (2004) that space syntax can indeed deal with regular grids because there is no pure, standardised values for the axial lines since the lines will connect to the outside, and the grids will be 'interrupted' by buildings. Hillier and Penn (2004) also states that space syntax also accounts for building heights and land use. To account for building height, space syntax deals with regression models rather than the spatial model. Space syntax also does not take into account land use in order to separate the impact of configuration and movement on land uses. In fact, the dependent variable of space syntax is land use where spatial configuration is hypothesised to



influence movement and thus, influence land use patterns (Hillier and Penn, 2004). In short, space syntax does not work for land use because it seeks to uncover how cities work spatially as opposed to copying existing urban phenotypes. Hillier and Penn (2004) thus argues with Ratti's (2004) criticisms that despite how simple axial maps may seem, the results usually enable the development on the different theories and aspects of functional spaces.

Ultimately the 'space syntax' concept is a theory that extends the concept of 'syntax' to social relationships and encounters within space (Hillier et al., 1976). It does not argue that particular societies lead to a particular spatial pattern nor does it argue that space is a reflection of society, although there are exceptions. Rather, the theory argues that there is a relationship between social syntax i.e. patterns of encounters and relationships, and spatial patterns- where space is a strategy to social form and is not designed consciously for forming relationships (Hillier et al., 1976).

#### **2.2.4 Public Neighbourhood Spaces**

This section will also define the concepts of 'neighbourhood' and 'public spaces' in order to better understand what spaces are categorised as 'public spaces' in the neighbourhood. As there is no set definition of 'neighbourhood', it is best to understand and define 'neighbourhood' as

“... multidimensional forms of urban organisation, comprising a series of spatially based attributes and processes relating to the built environment, the economic, social, and cultural characteristics of the population residing within them, the interactions between residents and the forms of employment, services, and facilities located within neighbourhoods, and how these are utilised.” (Flint, 2009; p. 354).

The function of the neighbourhood not only serves its residents for housing purposes, but it also serves as sites of consumption, civic engagement as well as a space to interact with (non-) family members who are in spatial proximity. This is juxtaposed to the idea of 'community', which does not mean that social relations are necessarily based on space, especially in contemporary settings (Aitken, 2009; Flint, 2009). As one of the functions of the

neighbourhood is to provide space(s) for interactions, there are usually public spaces for the neighbours, defined as non-family members that live in close proximity, to engage in social interactions (Flint, 2009). Although the dichotomy between public space and private space have been increasingly blurred (Galanakis, 2008), in this essay, public space is defined as a space that can be used by everyone, and open to public use (Mitchell and Staeheli, 2009), without any form of payment because it is owned and controlled by the state (Collins and Shantz, 2009). Hence from the definitions, this essay defines public neighbourhood spaces as spaces that are located within the neighbourhood, state-owned and controlled, and can also be used freely by everyone with the appropriate social decorums.

## **2.3 Place and Sense of Place**

‘Place’ is also a term that is used frequently in the geography discipline to mean a particular location (Foote and Azaryahu, 2009). Unlike ‘space’ which is viewed as the objective, scientific and mathematical descriptions of an area (Soja, 1980; Elden, 2009; Kitchin, 2009), ‘place’ is usually tied to a person’s experiences and emotions with(in) the environment (Tuan, 1974; Elden, 2009). This is similar to how contemporary cultural geography views ‘place’- where identity and attachment is expressed through values, obligations, intentions, commitments, emotional and social involvements (Foote and Azaryahu, 2009). This definition of ‘place’ hence leads to the concept ‘sense of place’ where 'sense' is a subjective notion and based on the human's perception (Foote and Azaryahu, 2009).

Due to the subjectiveness of the term ‘sense of place’, the term is also used vaguely at times (Foote and Azaryahu, 2009). The concept however is most commonly used to describe the perception of a place and induce feelings of attachment or belonging; for example, a particular location’s history or social setting may influence the perception of a certain location. It can also used to describe the feelings, relational bonds and attachments that people form with(in) their environments (Foote and Azaryahu, 2009). 'Sense' is thus tied to the process of placemaking i.e. shaping the environment and landscape, and as the end result of placemaking, it is a concept that describes what makes a certain 'place' unique to a certain person, social, cultural or national groups (Foote and Azaryahu, 2009).

### 2.3.1 Ageing in Place

‘Ageing in Place’ can essentially be defined as the ability to continue living independently in their own home and their neighbourhood as one ages (Chui, 2008; Fänge et al., 2012; Sixsmith and Sixsmith, 2008; Wiles et al., 2011). The term ‘ageing in place’ is one that many are keen about because most people would rather not live in an institution as far as possible but would rather stay where they are allowed to exercise their own sense of freedom, and privacy. This in turn allows the elderly to be able to independently maintain their own social networks without becoming a burden to their families (Sixsmith and Sixsmith, 2008). The home itself is also a site where it is representative of the ‘social memories and special meanings’ which are imbued into the space of their homes, or in the homes of their family (Chui, 2008; Sixsmith and Sixsmith, 2008). Furthermore, besides benefiting the elderly who get to maintain their independence and social network when they age in place, institutions save the cost of providing institutional care for the elderly (Wiles et al., 2011). This view echoes the view of Ministry of Social and Family Development (MSF) in Singapore where the idea of ageing in place is essentially developing and maintaining strong social networks with families and friends so that the elderly can continue to live within the neighbourhood (Donaldson et al., 2015).

In general, most literature view ‘ageing in place’ as a generally positive concept since ‘dependency’ is seen in the negative light in Western cultures. There are however certain arguments against ageing in place as put forward by Sixsmith and Sixsmith (2008). Sixsmith and Sixsmith (2008) argue that to determine whether ageing in place is a positive or a negative experience, this is partially dependent on the space and place. A poor housing condition can be detrimental to the physical and mental well-being of the elderly. An example is that a damp house with hazards may cause health problems such as allergies, or a higher incidence of falling. Poor quality housing with bad security systems can possibly cause an elderly to live in fear of crime, contributing to psychological distress. This causes them to sacrifice certain social events in order to combat their fear. Even if home space is in good condition, elderly who are living alone do suffer from loneliness (Sixsmith and Sixsmith, 2008; Wong and Verbugge, 2009). Lastly, while living independently allows the elderly to establish a sense of autonomy and control, this is also highly dependent on the wellbeing of the elderly and how they choose to engage with the home space. Sixsmith and Sixsmith

(2008) cites the example of how older women living with arthritis have difficulties negotiating their home space when even showering is difficult. In cases with deteriorating health, some elderly who have to use instrumental support find; it stigmatising and exclusionary rather than a helping tool for them negotiate their home space. Finally, it is also crucial to note that ageing in the Singaporean context, is very much different from what is proposed in most of the Western literature due to the 'family' and 'filial piety' discourse in Singapore, as mentioned when providing the Singaporean context to family and ageing.

Although living the 'family' and 'filial piety' discourse may be Singapore's prescription of enabling elderly to successfully age in place so that the elderly population will not feel isolated, from Wu and Chan (2012), it shows that both elderly living independently and living with children in Singapore are the most prone to feeling isolated in old age. This is similar to the results from Chen (2008) in Taiwan. Hence exploring other solutions besides living with family, or filial piety, would perhaps decrease the elderly social isolation cases in future. Chen (2008) stated that the emotional needs of the elderly have to be met by the supporting system of the neighbourhood community that (s)he is based in in order to help the elderly age in place and maintain their independent life. This opinion is also supported by Wiles et al. (2011) who states that just merely looking if the elderly feels a sense of place in their homes is inadequate because the older person is constantly (re-)negotiating new meanings and identities within the socio-political and emotional landscapes. It is then proposed by Wiles et al. (2011) that to foster ageing in place, one has to look beyond the home space to the space of the neighbourhoods and communities, which are crucial determinants to stay within the neighbourhood. This is backed up by Buffel and Phillipson (2015) who state that the older people are most likely to establish a stronger sense of place in comparison to other generations, and are thus most affected by the changes in the communities. The factors that influence the decision to stay not only include accessibility and proximity to amenities but also the interactions with neighbours and the ability to participate and contribute to the neighbourhood community (Sixsmith and Sixsmith, 2008; Wiles et al., 2011). This is evident from the enthusiastic responses of the elderly participants in Wiles et al.'s (2011) paper about enjoying the communities that they are in. While the home space is important as a refuge, Wiles et al. (2011) argues that the familiarity with the neighbourhood space and neighbourliness are factors that are just as important. This is because the elderly feel that they are able to turn to their neighbours for help, just like "being part of the family". This allows

the elderly to feel more secure within their own communities, with a lower likelihood to move away (Wiles et al., 2011; Buffel and Phillipson, 2015). This also coincides with studies in other parts of the world where people who have good relations with the communities and neighbourhoods have better physical well-being than those who are socially disconnected, where they are between two and five times more likely to die from all causes (Power et al., 2007). This theory is also evident with Wu and Chan's (2012) findings where social participation in neighbourhood events, contact with neighbours and non-coresiding relatives and friends help to decrease the likelihood of old age isolation.

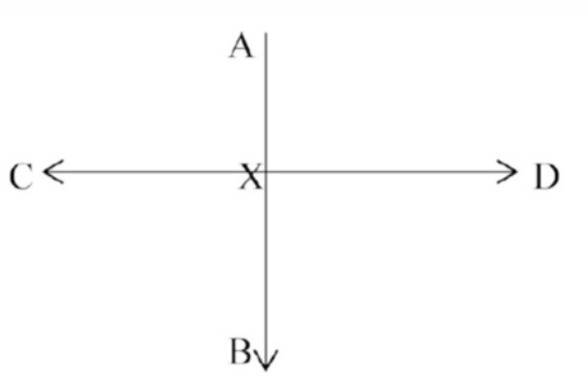
Overall, attachment to public neighbourhood spaces has a material impact and is a tangible resource for ageing in place because familiarity with the neighbourhood provides a sense of security while the friendships with neighbours allowed the elderly to feel like they belong (Wiles et al., 2011; Power et al., 2007). It is also crucial to note that elderly has to establish good contact relationships with their neighbours as opposed to just relying on their current social network of friends. This is because the decline in contact with neighbours is not as sharp as decline in contact with friends as one ages older, especially when turning age 70 and 80 (Wu and Chan, 2012). The need for establishing good relationships in the neighbourhood is further supported by Buffel and Phillipson's (2015) paper where they present the case where many elderly who were 'ageing in place' were unhappy about the changing community spirit due to 'new arrivals' because the change affected their daily lives i.e. having a limited number of close friends available within their area. Hence in the next section of this literature review, the paper will look at intergenerational spaces so that the elderly residents will be able to feel even more rooted in the neighbourhood with interactions from different generations.

## **2.4 Intergenerational Spaces**

### **2.4.1 Defining 'Intergenerational'**

To better understand 'intergeneration', the word 'generation' will be defined since it has taken on many meanings in modern society, social science and in gerontological studies. Burnett (2010) explains the varying concepts of 'generation' using an axis illustration in Figure 2.2. The A-B axis assumes time will be moving from Point A to Point B, hence representing the generations of offspring in a family, with our ancestors clustered around Point A, and our immediate family clustered at various points around Point X. The C-D axis represents

‘generation’ as a cohort, where each birth cohorts have particular characteristics or share the same history (Hagestad and Uhlenberg, 2007). By understanding how we use ‘generation’, it gives a better understanding of how we use “We”, “I”, “Them” and “Us” since it is a form of social location. It situates us and marks our temporal, familial and societal boundaries (Burnett, 2010).



**FIGURE 2.2 REPRESENTATION OF ‘GENERATIONS’. SOURCE: BURNETT, 2010; PG. 2.**

With a better understanding of what ‘generation’ means, it is easier to understand ‘intergenerational’ as a concept. The idea of ‘intergenerational’ is most commonly defined as focusing on the relational aspect such as communication and relationships in between the different generations (Kaplan et al., 2007). As the idea of ‘generation’ also shapes our social identities, it can be noted that perceptions of our social identities are not fixed because it is spatially and culturally specific. Perceptions of our social identities are also affected by the relations between different generations, essentially intergenerational relations (Pain, 2005). Due to the fluidity of our social identities and their relationship to other generations, intergenerational relationships fostered thus

“affects our social interactions, how we use local spaces, our opportunities to take part in public life on an equal basis with others, the degree to which we participate in community life and efforts to improve it.” (Pain, 2005; p. 10)

Due to this, this thesis proposes looking at intergenerational spaces and practices as a way to ensure a more equal use of public neighbourhood spaces in order to help ageing in place.

### **2.4.2 Intergenerational Spaces**

Intergenerational spaces are most commonly understood to be a site that is designed to facilitate interaction between members of different generational groups (Vanderbeck and Worth, 2015). This is unlike ‘multigenerational spaces’ which only focus on an inclusive design, but does not have any focus on the ‘relational’ aspect (Kaplan and Haider, 2015; Thang, 2015). The goal to promote interactions between different generations is also evident in intergenerational programs which are first conceptualised in the United States in the 1960s (Melville and Hatton-Yeo, 2015; Thang, 2015). It was then recognised later in the 1980s to be a feasible option to address a variety of social issues such as substance abuse, and social isolation. This then spurred the implementation of intergenerational programs in reality in order to attempt to regeneration of local communities, integration of new residents and promotion of active ageing in the 1990s (Melville and Hatton-Yeo, 2015). In recent years, intergenerational practices have been used to facilitate cohesive and engaging communities instead of simply being an intervention strategy during the 1980s and 1990s (Melville and Hatton-Yeo, 2015). One way to implement intergenerational practices as part of everyday life is to build intergenerational spaces in order to facilitate relations between different generations, preferably whom are non-biologically linked, in public spaces (Thang, 2015).

### **2.4.3 Advantages of Intergenerational Space**

The benefits of age integration as part of everyday life is clear when juxtaposed with the disadvantages of age segregation at an everyday level. Age segregation, or generation segregation, mainly dominates the social and geographical scenes in most places in the global North (Vanderbeck and Worth, 2015; Melville and Hatton-Yeo, 2015). Some examples of age segregated spaces include educational institutions for the young, nursing homes for the old as well as workplace environments (Vanderbeck and Worth, 2015). By (re-)producing age segregated spaces, it will result in the (re-)production of age segregated social relations. This exclusion may ultimately result in the inability for each generation to understand the point of view of other generation(s) (Vanderbeck and Worth, 2015). It will also contribute to “age-discrimination, age-based conflicts, increased vulnerabilities and social isolation”(Thang, 2015; p. 19). Intergenerational practices and spaces hence offer a solution to counter age segregated societies as they meet the diverse needs and offer all generations across their life

course to engage and participate positively (Melville and Hatton-Yeo, 2015). The benefits of intergenerational spaces is proven to have generated

“enriched learning experiences for children and adults, enhanced health for older adults, increased activity in the community and reduced financial expenditure.” (Kaplan and Haider, 2015; p. 44)

This is seen through examples of how valued and empowered participants feel when participating in intergenerational models to make a positive change to their community (Kaplan et al., 2007). An example raised to highlight the benefits of intergenerational space is through the Hope Meadows case study by Power et al. (2007), an intergenerational community that houses adoptive families and older adults in the United States. The case study mainly provide the accounts of two seniors- Bill and Esther- who remained purposefully engaged till the end of their lives despite serious health problems. Through the case study, Power et al. (2007) was also able to show that an intentional intergenerational community played a role in improving the health and well-being of the elderly population since it required them to use their skills and experiences to contribute to their neighbourhood community. Power et al. (2007) shows that the intergenerational site does not only benefit the elderly, but the younger generations who are living in Hope Meadow, providing the families who adopt foster children with a supportive environment for families. Through the case study, it hence illustrates that intentional intergenerational spaces and programs recognise that relationships between generations are not unidirectional, but are fluid and reciprocal with negotiations and contestations (Vanderbeck and Worth, 2015).

#### **2.4.4 Establishing Intergenerational Practices: Challenges and Solutions**

Despite the many benefits of intergenerational practices and spaces, one main critique of the ‘intergeneration’ concept is that it prioritises the differences and reinforces the stereotypes, such as older people feeling weak, dependent, vulnerable and fearful (Pain, 2001), between the different generations. This makes it dangerous when the concept is being treated as if it has a concrete existence since it may not be a problematic or significant issue in all neighbourhoods, and in different contexts (Pain, 2005). To meet the goals of the ‘intergenerational’ movement, it also sometimes pushes only the ‘representative’ members of



each generation to participate and be a voice for their groups. This is pointed out by Pain (2005) as a problematic and an unsustainable solution because there is an enormous diversity within the generational groups. Pain (2005) has also further pointed out that the older age groups are generally more involved in civic participation and community activity in comparison to the younger age groups, resulting in the 'intergenerational gulf'- a discrepancy in position between the two generations within neighbourhoods. This leads to a lower quality of life and increasing social exclusion. It also leads to a contestation of public neighbourhood spaces between the different generation groups. The contestations of space ultimately cause a barrier for everyone in the neighbourhood to participate in current and future strategies which aim to reduce neighbourhood inequalities and foster regeneration and renewal (Pain, 2005; p. 3). One example of contestations of how different generations use space in neighbourhoods include a study by Pain (2001) that observes how different age groups negotiate, or are expected to negotiate based on their stereotype, within public space. When young people negotiate places perceived as dangerous because of other young people or adults, they would choose to go out in groups with other young people. Due to the differences in generations and how they perceive actions, hanging out in groups has caused members from other age groups to perceive them as a nuisance or being up to no good, resulting in fear and annoyance (Pain, 2001). Pain (2005) ultimately suggests that the solution to generating a continuous stream of intergenerational interactions can only be sustainable, only if there is an understanding of perspectives between the different generations, inclusiveness with individual and an active communication in voicing out their needs within the neighbourhood. To achieve that, Pain (2005) states that it is crucial to note that 'intergenerational relations' comprise of a complex mixture of both 'conflict' and 'cohesion' which varies from place to place.

There have also been other challenges that prevent the establishing of intergenerational practices and spaces. The main challenges according to Pain (2005) include the following: generic concepts and definition and lack of clarity in goals at times; the consideration of isolation and to be inclusive to all in communities; need to tackle the ageist mentality in societies; need to cater practices based on the different contexts; and difficulties in monitoring and measuring outcomes effectively. The difficulties in monitoring outcomes have also been raised as an issue by Langford (2007)- where she mentioned staff who are gathering data for researchers' usually do not feel like they are part of the evaluation process nor do they feel like they gain anything through the process. Furthermore, the work carried out for

intergenerational practices usually go against organisational habits and systems. This discrepancy in values that intergenerational initiatives and organisations push for hence allocates intergenerational work as additional and are usually carried out by busy individuals who have other commitments (Langford, 2007). Langford (2007) ultimately suggests that paying staff extra time to reflect and evaluate allows the staff to feel valued, and involved in the intergenerational activity. Langford (2007) also suggested using arts over a span of three years as a solution to better communicate and understand the elderly whom the staff are working with.

#### **2.4.5 Design for Intergenerational Spaces**

The design goals for intergenerational spaces are similar to the definition of intergenerational spaces, where besides creating environments that are able accommodate multiple generations, it also has to create environments that create opportunities to generate engagement between different generations (Thang, 2015; Kaplan and Haider, 2015). Kaplan et al. (2007, pp. 89-90) introduces the four-step linear progression for designing intergenerational spaces where the first step begins with articulating basic human needs and experience in the context of intergenerational relations. The second step translates the human need into more operational terms. The third step transforms the design principle into environmental terms- building a structured space that fosters informal, unstructured intergenerational encounters. The last step ends with a specific environmental response to the goal e.g. a toy library in an adult day care center to enhance meeting of old and young. The advantages of considering the space design is imperative because of how the (re-)production of space affects the individuals' relations with space as well as the intergenerational relations formed within space itself (Kaplan et al., 2007). By designing an intergenerational spaces for people of all ages, it then makes it easier for intergenerational professionals to translate intergenerational concepts and values, such as being inclusive and inter-dependence, into an actual community space (Kaplan et al., 2007).

One prominent promotion of the design of intergenerational spaces is the Age-friendly City promotion by World Health Organization (WHO) in 2007. The Age-friendly City proposes that cities are able to enhance the lives of the elderly by encouraging them to age actively. It also seeks for cities to be inclusive to the people of different age groups. WHO (2007) proposes that the cities should respect the elderly and recognise the potentials and

contributions that the elderly can make for society. It also proposes that cities should cater to the needs and preferences of the ageing population and take active steps to protect the vulnerable elderly in order to become more age-friendly. As this research on intergenerational spaces is only mainly interested in how space can be built to foster intergenerational relationships within the neighbourhood to combat isolation, this is usually done through the suggestions of social participations. An implementation of subsidised, and increased frequency and range of social activities can be done in different areas that are accessible to the elderly. This is to include the elderly who are poor, or who are too frail to travel longer distances. Another implementation that age friendly cities can do is to give the elderly a place in neighbourhood, for example volunteering in areas such as gardening or community education. There can also be a reservation of certain jobs for them. Another way that WHO (2007) suggests in fostering intergenerational relationships through space is building facilities that would encourage the mingling of different generations. This is done so by making structural changes to the cities. An example will be designing modern flats that has communal facilities and also allow room for communal interactions. Another change could also be to have better organised neighbourhoods with local street committees in big cities in order for the neighbours to get to know each other better. The infrastructural change is backed by Beard and Montawi (2015) where good urban design would be a factor that would encourage the elderly to age actively. By introducing intergenerational spaces, it is a first step to maintaining a sustainable economy because it would raise awareness of the potential demands that the elderly may need and hence the development of care services for the elderly (Peng and Xie, 2015).

Despite the fact that the Age-friendly Cities seem to be catered more for the elderly demographic (Thang, 2015), WHO (2007; p. 27) states that the age friendly city emphasises 'enablement' rather than 'disablement' by catering the environment for a diversity of ages and capacities. This means the Age-Friendly City as a design framework is all-inclusive for all ages. WHO (2007) covers a comprehensive list of what cities can implement in the different aspects of the Age-friendly City which are as follows: Outdoor spaces and buildings; transportation; housing; social participation; respect and social inclusion; civic participation and employment; communication and information; and community support and health services. The list of how to create an Age-friendly City (WHO, 2007) is similar to the suggested design in spaces to facilitate design for intergenerational spaces proposed by

Kaplan and Haider (2015). One important design feature to note suggested by Kaplan et al. (2007) is the flexibility of the built environment where space should be able to accommodate both planned and unplanned activity in order to provide more opportunities for a variety of different intergenerational engagement.

Although the list of design suggestions for intergenerational spaces is comprehensive, Kaplan and Haider (2015) stresses that it is simply for consideration and instead states the importance of participatory design- where environmental designers should instead embrace participatory methods in order to give people within the neighbourhoods the autonomy over their local environments (Kaplan et al., 2007). Participatory planning also enables residents to articulate and visualise what they want, need and will empower them within their living environment, it also enables them to have control over their opportunities to engage with their neighbours or to maintain their privacy (Kaplan et al., 2007). Such a practice itself in fact generates opportunities for intergenerational communication and cooperation (Kaplan and Haider, 2015). Besides having a successful design to facilitate conversation, the space design has to ultimately align with programs and policies that are pushed and recommended by the state (WHO, 2007; Kaplan and Haider, 2015). It is also suggested by Kaplan and Haider (2015) that space design should take into consideration the socio-historical context of the space in order to draw deeper connections and character to public spaces in order to make them desirable destinations to the local community.

#### **2.4.6 Intergenerational Community Spaces in Singapore and Tiong Bahru**

HDB (Housing Development Board) is the sole provider of public housing in Singapore. Due to its unique position, it has power to shape policies, build infrastructure and facilities to encourage bonding within the neighbourhood (Thang, 2015). With policies placed by HDB to encourage filial piety such as giving housing applicants more priority if they choose to live near their parents (Committee on Ageing Issues, 2006), or the Proximity Housing Grant (HDB, 2015), it not only influences intergenerational support among families, but also resulted in a greater mix of age groups living in the neighbourhood (Thang, 2015). One of the ways to enable bonding across generations within the community is that HDB has built 3-Generation (3G) facilities - a playground, adult fitness corner and fitness corner for older people- usually in the heart of neighbourhood communities. Through these facilities, HDB

hopes to promote multigenerational bonding between residents who are frequent users in this space (Thang, 2015). Through Thang's (2015) research, these exercise and play spaces have proven to be multigenerational and intergenerational, among family where the grandparents are taking care of their children, despite the age distinction marked for the spaces.

Other spaces that are generally identified to be spaces for intergenerational encounters are the food places scattered within the estate such as markets, food centers, and coffee shops (Thang, 2015). The markets and food centers are usually built in the heart of neighbourhood estates for all residents to easily access. As wet markets and hawker centers are scattered across the Singapore landscapes, most Singaporeans are familiar with the space and place of the market. The markets in Singapore hence becomes one of the default and essential nodes of social relations since most Singaporeans

“... establish interactions of mutuality and reciprocity within the public realm among families, friends and strangers and across ethnicities, generations, social statuses and classes (Castells, 2003; Lofland, 1998; Watson, 2009).” (Mele et al., 2015; p. 108).

The community building is displayed through the interactions between vendors and their customers, where vendors will sometimes join in conversations that were between customers, sometimes even from across a fair distance. Special relations were also established between vendors and their regulars where discounts and the best items were reserved for the regulars, or when they can hold personal conversations with their regular customers (Mele et al., 2015). Markets have also become an informal gathering place for shoppers to mingle and interact with each other. This is mainly done by sitting and talking over drinks or food (Kong, 2007; Mele et al., 2015). Besides being part of the everyday life of the community, markets usually have organised activities to bring the community together. Such activities either include publicising and organising events for ethnic or religious festivals (Mele et al., 2015) or holding charity drives or Neighbourhood Meal Programme to help the needy in the neighbourhood (Kong, 2007). By actively organising programmes and events to bring the community together, the market and hawkers establish themselves as an integral part of the neighbourhood. This facet of community building is especially crucial because it acts as a node for the elderly to be more integrated in community life in the neighbourhood (Mele et

al., 2015). Being part of the quintessential spaces in Singapore, hawker centers have now been marketed as a must-see tourist attraction and experience. Markets in Singapore thus have an increasing demography of clientele who are either tourists or part of the expatriate demographic (Kong, 2007). A 2005 survey conducted by the National Environment Agency (NEA) and Ministry of Community Development, Youth and Sports (MCYS) showed that despite the appeal of air-conditioned food courts and modern dining, almost all age groups including the younger age groups would continue to patronise hawker centers and markets due to the cheaper prices and convenience that it offers. From the types of spaces that were planned to promote community multi-/ inter-generational bonding in Singapore's neighbourhoods, the spaces that promote such bonding within the estate echoes the type of neighbourhood spaces that is located and built within the Tiong Bahru estate. In the case of Tiong Bahru estate, the Tiong Bahru Food and Market Center serves as one of the main nodes of social life. The market was established as a single storey structure in 1950, destroyed in 2004 and completely rebuilt in 2006 (Bravo, 2015; Kong, 2007). The rebuilt double storey Tiong Bahru Market allows for the land in Tiong Bahru to be used more efficiently. It is built to look like its surroundings, and the height is comparable to the SIT blocks surrounding it (Kong, 2007). This confirms the integral role that the market spaces are for Singaporeans (Kong, 2007). With a huge diversity of people accessing the markets and hawker centers, Tiong Bahru Food and Market Center is indeed a potential place to establish intergenerational bonds in order to allow the elderly living independently to feel the sense of belonging and contribution towards their neighbourhood.

Besides Tiong Bahru Food and Market Center, literature has also pointed out that the now defunct bird corner, open spaces and the Tiong Bahru community center are also picked out to be significant neighbourhood spaces over the course of history in Tiong Bahru. These spaces are also potential spaces in establishing intergenerational ties. The now defunct bird corner located at the junction of Seng Poh Road and Tiong Bahru Road was one example of a space which brings the bird lovers and residents in the community together. Built outside a coffeeshop to attract business, bird lovers began to gather to enjoy a cup of coffee while chatting and admiring each other's birds (National Heritage Board, 2013; Remember Singapore, 2013). As long as one was curious or interested in the birds, the bird corner serves as a space to bring the neighbourhood together. Open spaces also serve as spaces for the residents to gather for activities such as exercising together (Kong et al., 1996, National

Heritage Board, 2013). One example of residents utilising open spaces as an exercise corner is the Seng Poh Garden (National Heritage Board, 2013). Another space that promotes community bonding is the Tiong Bahru Community Center, which is the first community center that is established in Singapore. It is established in 1948 when the Tiong Bahru residents voted that a

“community center is most desirable to further the moral, cultural, physical and advancement of the residents of Tiong Bahru.” (National Heritage Board, 2013).

In the early 1950s, the Tiong Bahru community center certainly functioned as a multigenerational space with its regular film show screening, charging 10 cents per screening. This not only brought the residents together but also attracted street vendors who jumped at the business opportunity to sell their snacks to be enjoyed during screenings. It also had weekend dances and entertainment, lottery, and a Youth Section. After its reopening, the community center started to cater lessons to children, and lifestyle classes to adults (National Heritage Board, 2013).

## **2.5 Literature Gaps in Geographies of Ageing and Intergenerational Studies**

Within the general discipline, Geographies of Ageing, the main future and direction are for research of more depth and scope of collected theories, concepts and methods of geography in gerontology research (Pain and Hopkins, 2010). The three largely neglected themes in ageing geography to be pursued are relational thinking, interrelatedness of place and non-representational geographies. In comparison to traditional geographical perspectives, the relational and non-representational perspectives are more inclined to recognise the elderly individual as ‘fluid’ based on their individual life course experiences, their relationships with others in their social life, their interactions with space, and their establishment of sense of place (Skinner et al., 2015). This then leads to suggestions of different strategies to provide customised services that cater to the need(s) of the individual rather than towards elderly as a collective whole (Skinner et al., 2015). Skinner et al. (2015) also suggests focusing on the contributions that elderly make in society, by looking at how they relate to other people. Skinner et al. (2015) stated that exploring the roles of contribution by the elderly play in age-

friendly cities will be of relevance to the discipline, given the proliferation of WHO (2007) age-friendly framework. The biographies of elderly, of both famous and everyday older people, will enable others to glean further insights from their life stories and thus have a further understanding and appreciation of the elderly in society. This thesis hence aims to contribute to the gaps in this discipline through mainly exploring if the roles of the elderly i.e. contribution or participation in the community allow them to establish a 'sense of place' in communal public spaces. As the thesis is also exploring intergenerational relationships that are formed in public spaces in Tiong Bahru, it also views the elderly as an unique individual that is in relation to other, in particular people from other generations.

Despite the idea of 'intergenerational' being developed steadily for the past twenty years (Melville and Hatton-Yeo, 2015), there are still many gaps that are present in the body of intergenerational research literature. One of the main areas to be further explored is a better understanding of how intergenerational programs work in greater detail and whether they do meet their aims (Melville and Hatton-Yeo, 2015; Buffel and Phillipson, 2015). This could be done by validating the claims of practitioners. Doing so would then enable researchers to be more equipped to better define intergenerational practices and thus give more specific suggestions to improve intergenerational practices (Melville and Hatton-Yeo, 2015). Furthermore, Melville and Hatton-Yeo (2015) also pointed out that most intergenerational research are not based on theoretical frameworks and also ignore the interactions that occur between generations, which is the crux of intergenerational practices. Besides investigating the interactions that occur between generations, Melville and Hatton-Yeo (2015) have also pointed out the lack of research that explores the relationship between intergenerational interactions and the built environment, and how the environment influences how people interact within the space. This could possibly be explored by tracing the changes that affect the character of urban spaces (Melville and Hatton-Yeo, 2015). Pain (2005) also suggests that more research could be done on the varying scales of the neighbourhood scale because intergenerational trends within the home or national scale are not always reflected within the community. In order to contribute to the literature gaps that are present in the current intergenerational discipline, this thesis intends to explore the relationship between the built environment, specifically public spaces in Tiong Bahru, and interactions and social relations between different generations that happen in space through the use of space syntax as a form of data analysis.



### 3 Methods

The research design draws on data triangulation- observation and semi-structured interviews (Robson, 2002)- in order to increase the expressiveness of the data gathered. The main method in this research is observation, and it will be supplemented by semi-structured interview accounts with elderly residents of Tiong Bahru. One of the reasons for choosing observation as the main method is mainly due to the lack of ability to fluently converse and articulate my thoughts and questions in Mandarin dialects such as Cantonese, Teo Chew, Hokkien et cetera. This slight language barrier would thus hinder the flow of the interview. Furthermore, as Tiong Bahru is undergoing urban regeneration, the constant changes in the neighbourhood such as the renovation of Tiong Bahru Market and the newly built community center, do affect the use of public spaces. Using observation as the main method hence enabled me to (re-)direct my attention to the next observational sequence if there is a new change in space, or activities without detailed explanation to those who may be involved (Flick, 2014). Delving into the research field as a participant during two public events also enabled me to better understand the residents' point of view because there were longer and more personal interaction and contact with the other event participants. Getting the overall context and more frequent interactions with the participants was something that gave observation an added advantage over conducting interviews in this research (Flick, 2014; Robson, 2002). The interviews with the residents who were living or lived in Tiong Bahru however, provided a valuable and different perspective in comparison to the observation data that was gathered. This advantage has enabled a deeper understanding of the research questions, especially from the individual's perspective (Valentine, 2005). It is imperative to note that the act of observing, perceiving and interpreting the situation is one that eventually reflects the observer's personal constructed meaning about the observed event(s) (Flick, 2014). This is similar for the interview process where the interviewer's reactions and follow-up questions eventually become part of the data collection. As with most qualitative data, the observer's subjectivity and positionality is thus ingrained as part of the research process. This section will thus later include my reflexivity- a critical and analytical reflection of my role as a researcher during the process (Clifford et al., 2010).

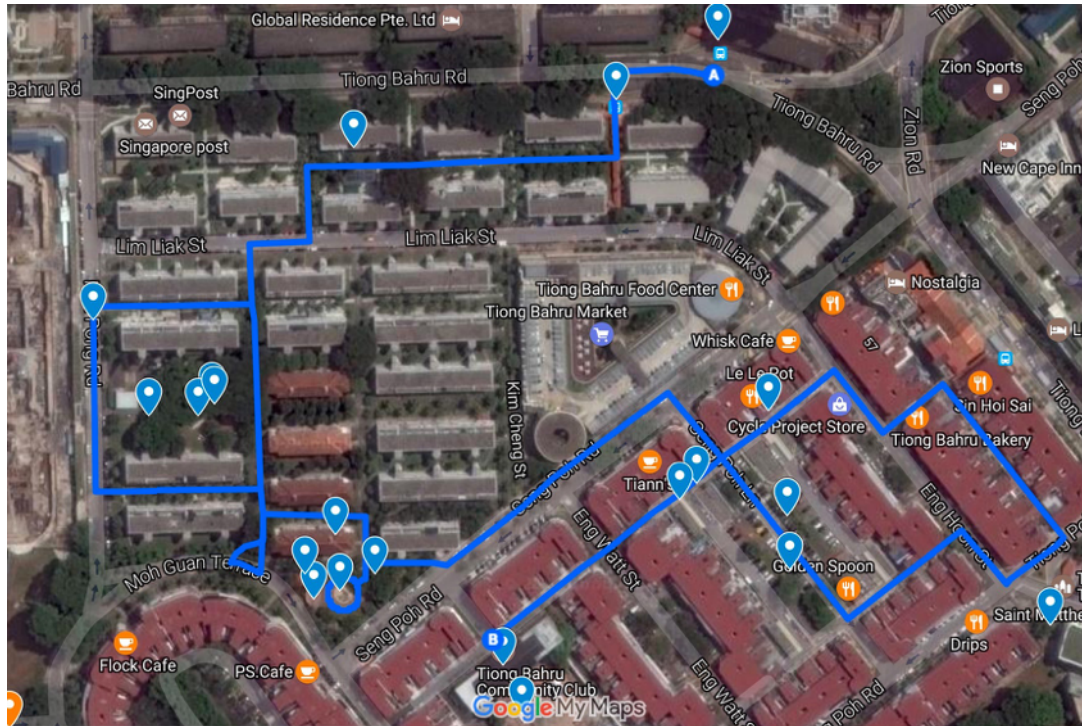
### **3.1 Observation: An Overview**

As this research intends to focus on intergenerational public spaces in the neighbourhood, the observation(s) will only be carried out in public spaces around the Tiong Bahru neighbourhood. The main focus of the observation will be to note down the intergenerational interactions that occur within the time and space that the observation is being carried out. In order to standardise my observations, I will be observing people from different age groups, and how they interact and/ or contest with each other, and with space. The observation methods carried out in this research include the following: Static snapshot method, observation both as a complete observer and as a participant. The static snapshot method is relevant for collecting information on how people use urban spaces in public areas and buildings. This method is supplemented with observation as the complete observer as this research looks at space as a fluid and a never-ending production due to the social changes that occur within (Kitchin, 2009). I also observed as a participant during events that are organised by and for the neighbourhood community. All observations were penned down during and immediately after each observation session as field notes in order to aid the recollection of finer details from the observation sessions (Laurier, 2010). The entire observation procedure was carried out until theoretical saturation is reached (Flick, 2014).

#### **3.1.1 The Static Snapshot Method**

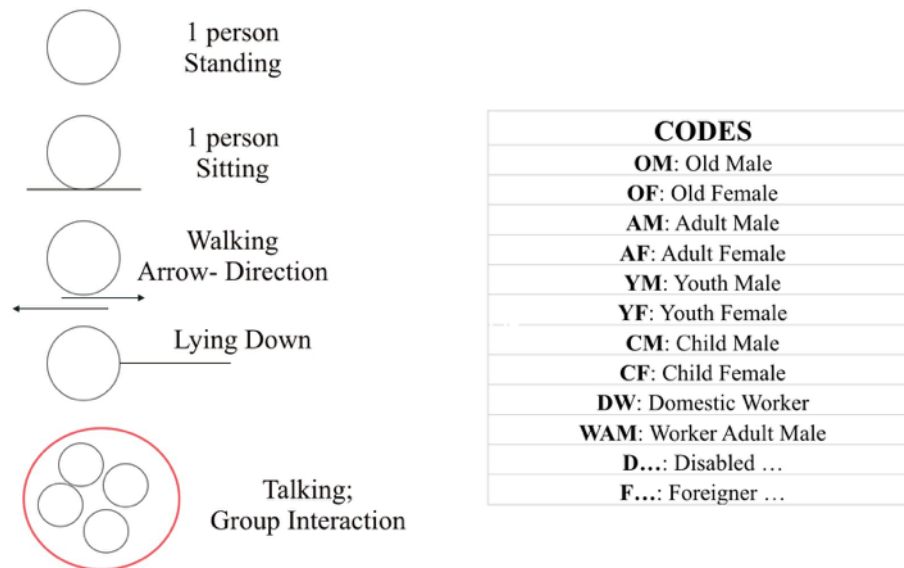
The static snapshot method is used when recording the space use patterns within buildings, and also public spaces. The static snapshot method can also be used to record both stationary and moving activities and is based on having a large-scale (1:50) minimum plan of the area under observation (Vaughan, 2001). The route was planned by doing several preliminary tours of the area. The planned route for the static snapshot method encompassed all public neighbourhood spaces in Tiong Bahru such as the Tiong Bahru Community Center (CC), Seng Poh Garden, playgrounds and public sitting area (Vaughan, 2001). As some spaces are too big to be observed due to their size, structure or the placement of furnitures, they were broken up to be observed accordingly (Vaughan, 2001). The route will be repeated thrice a day at - 7 a.m., 1 p.m., and 6 p.m. in order to observe how people use the spaces at different times of the day. These are the timings that are hypothesised to have the highest traffic of people in public neighbourhood spaces. This data collection was carried out for one whole

week in order to capture the different interactions with space and each other over the week, for example, some adults may choose to run errands during the weekends because they have to work on the weekdays.



**FIGURE 3.1 STATIC SNAPSHOT ROUTE. SOURCE: GOOGLE MAPS**

A complete set of plans i.e. the plans of the spaces in the route, with the recordings of furniture placements (Vaughan, 2001), was prepared for each observation session. As there are some public neighbourhood spaces that are in buildings, for example the community center, there will also be a separate floor plan for each level (Vaughan, 2001). During each observation session, I take a mental snapshot of each activity precisely during the time of observation. The following are the standardised codes- symbols and acronyms - that were used to illustrate who was in the space and what they were doing:



**FIGURE 3.2 STATIC SNAPSHOT: CODES AND ACRONYMS.**

Besides recording the use of space, the exact time and GPS location of observer were also recorded down during the observation should there be a need for reference during the analysis stage. Although Vaughan (2001) states that the coded activities should be recorded with a minimum 75% accuracy, it was possible to record the data that was collected in Tiong Bahru almost accurately because there was a manageable amount of traffic during all observation sessions. However, the static snapshot has its limitations.

### 3.1.2 The Complete Observer and Participant Observation

This method was implemented as the main part of research methods to complement the static snapshot method. While the static snapshot captures the use of space at that very second, it does not capture the nuances that happens with time. For example, a person who is recorded as standing alone in the area may interact with his/ her friend who arrived after the static snapshot method was carried out. Observation as a complete observer means that observation is done with minimal disturbance(s) to the persons who are being observed. This means that I usually observe, and write down my observations from a distance while being as inconspicuous as possible in order to avoid influencing the people who were observed i.e. people who went or passed by the public spaces located in Tiong Bahru (Flick, 2014). As the observation is performed in open public spaces, consent from observed people could not be obtained. However, in order to maintain the privacy and anonymity of the observed people,

descriptions of the people were mainly kept general, names were changed and faces were excluded from the photos that were snapped during the observation sessions. However, observing as a complete observer poses a problem- while it is easy to be inconspicuous in a public space, it does not enable me to gain access and participate in spaces and places where 'membership' of some form is required (Flick, 2014). Hence, in order to gain access to more exclusive spaces, I had to conduct participant observation in events that were open to all members of the public, but required a certain form of 'membership'. For example, knowing someone who participated in these events, being in the neighbourhood, or joining their social media page for event updates.

During the course of data collection in Tiong Bahru, there were two events- Coffee Corner and Karaoke Corner that were opened to the public, where I observed as a participant. Observing as a participant means that instead of observing from a distance or an objective manner, I, as a researcher and observer in this project dived into the field and participated fully in the events as a participant (Flick, 2014; Robson, 2002). Not only does doing participant observation enabled me to be able to observe and place myself in the perspective of a member; by the act of participating, I am also influencing my observations (Flick, 2014). However, this may be problematic because my presence and actions may be considered as a 'disturbance' to the group (Flick, 2014). Nevertheless, this can be used to my advantage during data collection if there were further reflections on my positionality and how my initial presence may influence the dynamics of other members (Flick, 2014). The process of participant observation involves the researcher starting off as the 'outsider' and subsequently gaining enough competence to eventually become an accepted participant. This means that what initially comes across as a culture shock to the observer eventually becomes viewed as a norm (Flick, 2014, Laurier, 2010). This transition from outsider to participant was reflected during the karaoke session where everything seemed odd at first, and I eventually eased in to become a participant. Although the participants for both observed events knew that I was a researcher and I explained my research scope to them, I subsequently kept my researcher status low key by writing the field notes after the events. This is mainly to ensure that the participants do not feel stressed that they were being observed.

The observations from the observation sessions and events were all written in a notebook as field notes. The field notes were mainly written as a detailed account of the observations and

interactions with the field contacts (Flick, 2014). These notes were then later compiled together with photos taken during the observation session into a digital format to be processed for coding analysis. The main reason for recording field notes was to recall more details from the sessions and events. While there were other medium of recording observations such as protocol sheets (Flick, 2014) and video transcripts (Laurier, 2010) that were suggested, field notes were the most appropriate choice because they do not restrict the observer's attention and perception to new details that a heavily structured protocol sheet would restrict (Flick, 2014). The use of field notes was also more appropriate than video footage in this context in order to avoid any breach of confidence and also to maintain the anonymity of those who were observed in this research.

Although there was a lot of data and insights gathered from the different observation methods listed above, there were limitations. One of the main limitations include how the observer can only observe limited phenomena since not all aspects of the situation can be noted at the one go (Flick, 2014), the observations jotted down is only part of the observer's perspective on the situation. Another limitation during the production of field notes and coding during the static snapshot method was the categorisation of people in their generational groups was not entirely foolproof just through observing because sometimes it was hard to distinguish if someone fell under 'adult' or 'old'/'elderly'. The inability to observe everything at the same time as well as difficulty in categorising the generations both in the field notes and static snapshot plans was thus best understood as the observer's subjectivity and perspective. This reflected how the researcher's subjectivity was a main part during the process of writing and producing field notes. Hence, the reflexivity of the researcher will be discussed later in order to position the researcher in the context of the field.

### **3.2 Semi-Structured Interviews**

The reason for semi-structured interviews to accompany observation was to gain a more personalised insight and analysis of the elderly's experience as opposed to observation which only offered the researcher a general context. In this research, there were five semi-structured interviews conducted with the elderly residents who were living, or constantly frequenting the Tiong Bahru neighbourhood. Semi-structured interviews mainly enabled the respondents to be able to freely express their emotions, and respond in their own words (Longhurst, 2010). This

facilitated an extensive analysis on their thoughts and emotions regarding their relationship with their neighbours and also their relationship with the neighbourhood's public spaces.

Through relevant literature and understanding of the topic, questions that I asked respondents were directly related to my research interests. Listed below were the main interview questions that were asked during the interview sessions:

- 1) How long have you been staying in this neighbourhood?
- 2) What is your usual routine for the week/ day?
- 3) Where do you frequently go in this neighbourhood?
- 4) What do you go to these places for? Did you use to do these in the past?
- 5) Do you see your neighbours in these spaces? If not, where do you frequently interact with your neighbours? Do you interact with your neighbours at all?
- 6) How often do you interact with your neighbours? Describe your interactions with your neighbours?
- 7) Were there any changes in the neighbourhood and your interaction with neighbours since the time you moved into Tiong Bahru?

As seen from above, the questions were open-ended, enabling the interviewees to give full and detailed information. In order to adapt to the flow of the interview narrative and conversation, follow-up questions and probes were also included in the interviews (Flick, 2014) so as to elicit a more in-depth answer and also better attempt at trying to understand their perspective (Flick, 2014; Longhurst, 2010).

I initially tried recruiting interviewees through snowballing, where one contact informs other contacts, who may in turn inform other contacts about the interview (Longhurst, 2010). However, this proved to be unsuccessful as most elderly who were contacted were reluctant to participate as they felt that they had nothing to contribute to a research study or did not want to potentially upset their family members. Therefore, the semi-structured interviews conducted in this research were often ethnographic in nature where conversations arose during participant observations and the interviews occurred spontaneously during observation (Flick, 2014). Although I have tried to arrange a time and place exclusively for an interview, all were uncomfortable in giving away their contact details, or were afraid they would forget

and would rather be interviewed on the spot. Despite the spontaneous nature of the interviews that may seem like a friendly conversation, the research purposes were explained and permission was obtained from all interviewees who have participated in this research (Flick, 2014). Although the data-collection of interviews would usually include an audio recording in order to focus fully on the interview and produce a detailed transcript of the conversation at the same time (Longhurst, 2010; Flick, 2014), two interviewees were not comfortable with their voices being audio recorded. Thus, notes were written down in a notebook during those interviews. The notes included the key points that were discussed during the interviews (Flick, 2014). As part of the analysis process, I also reflected on my position, emotions and the general tone of the interview (Longhurst, 2010). This was mainly because the interview itself

“is an active site where researchers and participants perform their stories, negotiate their identities, and construct meaning through interaction and interpersonal processes.” (Grenier, 2007; 716).

This meant that by conducting interviews with older people as a role of a researcher and a younger person, I would tend to perform and negotiate my identity which shaped the interpretation and results (Grenier, 2007). It was thus important to constantly reflect on the interviews' dynamics and my positionality during the interview sessions.

### **3.3 Ethics**

As the ethic code had its limits when observing in public spaces (Flick, 2014), when carrying out the static snapshot and observation sessions in public spaces, I ensured that I had my student card with me at all times in order to verify my identity as a researcher if anyone were to ask upon noticing they were being observed (Vaughn, 2001). While carrying out participant observation, I tried my best to ensure that most participants knew that I was a researcher and my project was about the elderly living in Tiong Bahru. Making sure that my interviewees knew what the project was about was also my goal before I conducted the semi-structured interviews. This is to ensure that their participation for the interview is voluntary (Flick, 2014). I also ensured that I obtained the consent of the interviewees to use their interviews in my research by taping down their audio agreement (where audio recording was allowed) or obtaining written consent via email when the interview was done over the



telephone. I also ensured that all interviewees were aware that the information collected from them would remain anonymous and confidential, unless they mentioned otherwise, and all the interviewees were informed that they have the right to withdraw from the research at any time without any explanation (Longhurst, 2010). Due to confidentiality issues, all names in transcripts and field notes were encrypted. Overall, this research did its best to adhere to voluntary consent for participation, and maintain confidentiality and anonymity of the participants in the research.

### **3.4 Analysis of Data**

#### **3.4.1 Space Syntax Analysis: Use of DepthMapX**

To process the data from the static snapshot method, all recorded data from 7 a.m., 1 p.m. and 6 p.m. over the week were compiled into one complete set of plans, which consists of all the public neighbourhood spaces observed and the floor plans of the community centers. This set of plans with the compiled data will then be compared to visibility graph analysis (VGA), axial analysis as well as agent simulations of the floor plans. The three types of analyses are generated by the space syntax software, DepthMapX. These forms of analyses are chosen because they reflect and analyse user orientation and visibility at any given point(s)/ grid(s) in space, as opposed to the isovist analysis which analyses visibility at a particular, usually vantage, point in space (Benedikt, 1979; van der Hoeven and van Nes, 2014). The analyses chosen will thus explain how spatial patterning have effects on social interactions and vice versa (Hillier, 1976; Hillier and Hanson, 1984) when contrasted with the data collected from the static snapshot method.

2D vector drawings in DXF format i.e. lines, polylines and polygons of the urban space in Tiong Bahru and building plans were imported into DepthMapX to carry out the analyses (Turner, 2004). Before carrying out the analyses, the grid properties for these plans have to be set. The Tiong Bahru plan was set to approximately 5 meters (1:0.14) for each grid, and the building plans for the community centers were set to approximately 1 meter (1:20) for each grid. Furthermore, to enable these analyses to be carried out with maximum accuracy i.e. results that were most reflective of the observed space, adjacent areas and buildings were included in the Tiong Bahru plan as seen in Figure 3.3. There were also some changes made to the floor plans as seen from Figure 3.4 a and b. This means that staircases were excluded

during the analysis and door features that were drawn protruding into public space, the lines that demarcate ramps, and the basketball court were also erased. Rooms that were fully glassed and meant for public access were also modified by excluding the wall. These modifications done to the original floor plan were to ensure that the software recognises these spaces as open, visible spaces to the public, and maintain the most accurate analysis.



**FIGURE 3.3 SELECTION OF AREAS FOR THE TIONG BAHRU NEIGHBOURHOOD ANALYSIS IN DEPTHPMAPX.**

The area explored during the static snapshot walk is within the red border.



(a)



**FIGURE 3.4 (A) ORIGINAL AND (B) MODIFIED FLOOR PLANS OF THE NEW CC.**

- a. the original floor plan of the new community center displayed in DepthMapX.
- b. the modified floor plan, in order to reflect visibility, displayed in DepthMapX.

### 3.4.2 Coding

In order to glean the most from the data collected, the qualitative observational field notes and interview transcripts would undergo coding, an analysis method that organised the data into the various research categories, themes and patterns (Cope, 2010). The coding analysis would be carried out using the software Atlas.ti. Not only does coding enable the most out of the collected data by enabling the researcher to read across the texts, the process of coding also enables the researcher to be more sensitive to the interconnected themes and categories in the data, helping to contribute to better conclusions in the research (Cope, 2010). Through the data collection, the most prominent themes that match the research themes derived from the literature review included the following: 1) the relationship between time and multigenerational spaces; 2) blurring of public and private space; 3) intergenerational spaces; and 4) contestations of space. The coding technique that this paper would adopt is open coding. Open coding mainly involves in vivo codes in the first level, where it is derived by reading through the qualitative data closely- line by line, marking out the important sections and subsequently using the original important words as codes (Cope, 2010; Forman and Damschroder, 2008). The in vivo codes that were produced from the interview transcripts and

observation log are in Appendix C. As the in vivo codes are mainly descriptive and usually from the participant's own words, there will be codes that will ultimately be combined or eliminated by the second level of coding. In the second level of coding, the codes that emerge will be analytic and deductive after reflecting on the in vivo codes generated from the texts and comparing them to the research questions as well as the frameworks and broader relevant literature that the research is based on (Cope, 2010; Forman and Damschroder, 2008). This process will also be aided with the coding software Atlas.ti. After the themes are built, it is best to further refine it by reading across the materials and identifying similar themes and patterns that may manifest themselves in different ways (Cope, 2010). These themes will ultimately be linked back to the research aims (Cope, 2010). Overall, the process of coding enables me to give equal weight to all interview accounts, even to the seemingly "unobservant" ones as these accounts may represent the general trend (Latham, 2010; 199).

### **3.5 Reflection of Researcher's Positionality**

The fact that the researcher has "a particular social identity and background" (Robson, 2002; 172) and is not an "objective, authoritative, politically neutral observer" (Bruner, 1993; 1) means that the researcher's identity will inevitably influence the interactions with the research subjects (Valentine, 2005; Longhurst, 2010). The identity and positionality of the researcher will not only have an impact on the research process during data collection, but also during the process of analysis and knowledge production where the researcher perceives and represents spaces, places and the research subjects (Moss, 2001; Clifford et al., 2010; Flick, 2014). This section thus aims to highlight areas of potential researcher bias (Robson, 2002) as well as understanding the effects of crossing generational boundaries (Grenier, 2007) by reflecting on the role and positionality of the qualitative researcher (Flick, 2014). I identified myself to the participants and interviewees as a 26 year old Singaporean Chinese female student completing my Master's studies in Finland when conducting both interview and observation sessions.

During the interview sessions, my nationality and my Chinese ethnicity enabled the interview subjects, who were of the same nationality and ethnicity, to generally feel comfortable to talk to me and share their life stories and values with me. At some points during the interviews, some subjects tended to share their philosophical approaches towards life. Examples included

Eddy who told me how I should not fully trust anyone, as well as Lana who reminded me that as part of the younger generation, it was important to demonstrate filial piety to the older generation in my/ our families. As there was also a constant theme on the negative impact(s) of foreigners and even ethnic minorities on the social environment of Tiong Bahru that arose during the interviews, these topics most likely surfaced because I was a local Singaporean Chinese female. Furthermore, the setting of the interviews also influenced the participants' level of comfort in expressing their opinions. For example, participants such as Mary, who was interviewed over the phone in the privacy of her own home, and Eddy who was in a room filled with people of the same ethnicity and generation were able to share their opinions on the theme which could be controversial or inappropriate in the presence of other ethnic minorities. In such settings, the participants perhaps felt that there would be little repercussions in expressing such thoughts in a safe environment and to someone who is of the same nationality and racial group as they are. This is in contrast to the interview with Lana, who was more wary about what she had to say about the younger committee members as the interview was conducted in the resident's committee's building. Thus, some parts of the interview in which the younger committee members were mentioned were omitted from the interview transcript as she did not want that information to be used in the research.

As a local Singaporean Chinese body in the space of Tiong Bahru, my ethnicity implied that I would be conversant in Mandarin. As most of the elderly population in Tiong Bahru are of Chinese ethnicity and are most likely more comfortable in speaking Mandarin, it thus enabled me to seem relatively approachable to the local elderly resident population during my observation sessions in public neighbourhood spaces. This was evident during brief conversations with some residents in the public spaces, most notably an elderly man who approached and talked to me on my first observation session. Despite my Chinese ethnicity, it was crucial to also note that my ethnicity intersects with my age- as the majority of the younger generation in Singapore was perceived to not be able to speak Mandarin fluently. This perception had caused me to be singled out a few times during participation observation sessions where the participants would debate among themselves in Mandarin about my ability to speak the language, despite reassuring them in Mandarin that I was able to fully understand and express myself in Mandarin. This perception of the younger generation had also initially affected my interview with Lana, who was annoyed at the fact that I spoke English to her at the start without knowing that she was more comfortable conversing in Mandarin. Although it

took a while to reassure her that I was proficient in Mandarin, this caused tension at the start of the interview where she avoided eye contact, and rolled her eyes initially until she eventually opened up after a few minutes of conversation. This perception of the younger generation's language abilities also applied to the younger generation's inability to speak, or even understand Mandarin dialects. This was notable during the observation for the karaoke session, where the participants discussed, and decided that I most likely was not familiar with any music that was in any of the dialects and out of good intentions, selected the only Mandarin song on the list for me. The fact that I am able to speak Mandarin and understand the dialects enabled me to understand what was going on most of the time without the need for translation. This also enabled interviewees and the observed group to be more comfortable with me and freely express themselves. Being conversant in Mandarin thus gave me an advantage to understand, and converse better with the elderly.

Being accustomed to students and their research on Tiong Bahru- Mariah, Lana and Mary immediately discussed facts and details about Tiong Bahru that they presumed I, as a student, would like to know. This resulted in a repetition of the questions during the interviews in order to clarify what I was trying to ask. As a student carrying out my research, the fact that I was jotting notes down while doing my space syntax observation walk three times a day and over the course of a week resulted in a few curious and suspicious glances from both the elderly population and shopkeepers who saw me carrying out my research every day. Ultimately, reflecting on this intergenerational research exchange shed light onto the emotions that influenced all individuals, including the researcher during data collection, and thus what was produced was also influenced by how individuals perform their social locations such as nationality, race, and age (Grenier, 2007).

## **4 Presentation of Results**

This chapter presents the compiled results that were generated from the methods (static snapshot, observations, and interviews) and analysis discussed in Chapter 3. The number of people that were drawn in the static snapshot diagrams from Figure 4.1 to 4.13 were compiled from the static snapshot walks that were conducted over a week from 7 a.m. to 7 p.m.. These figures will be used for discussion in the following discussion chapters, especially so in

Chapter 6 where they will be compared against the analysis that were produced by DepthMapX.

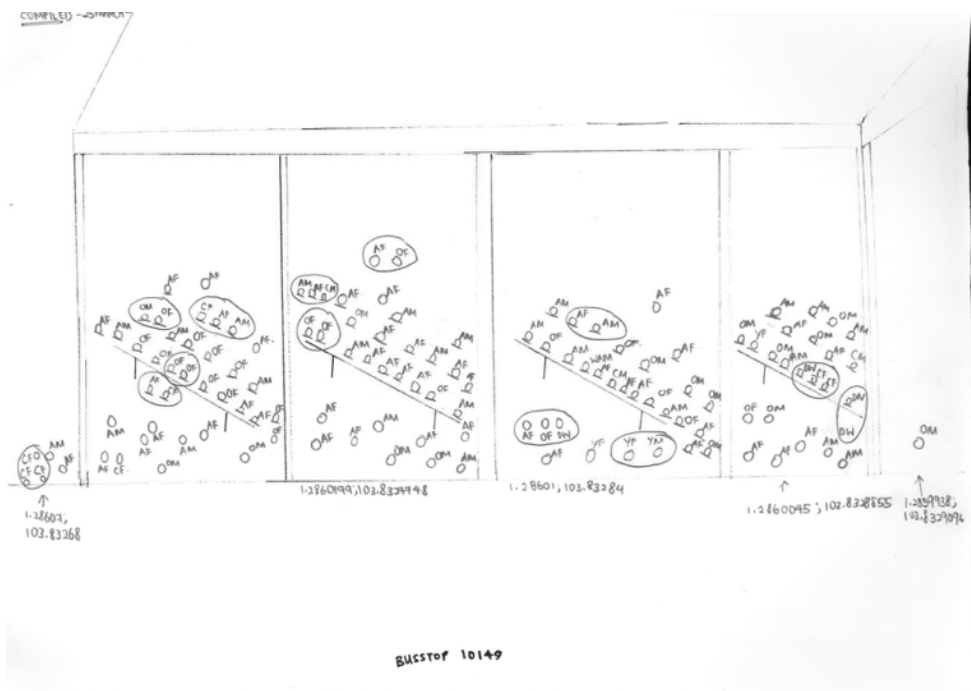


FIGURE 4.1 COMPILED STATIC SNAPSHOT OF PEOPLE OBSERVED IN BUS SHELTER 10149 IN A WEEK.

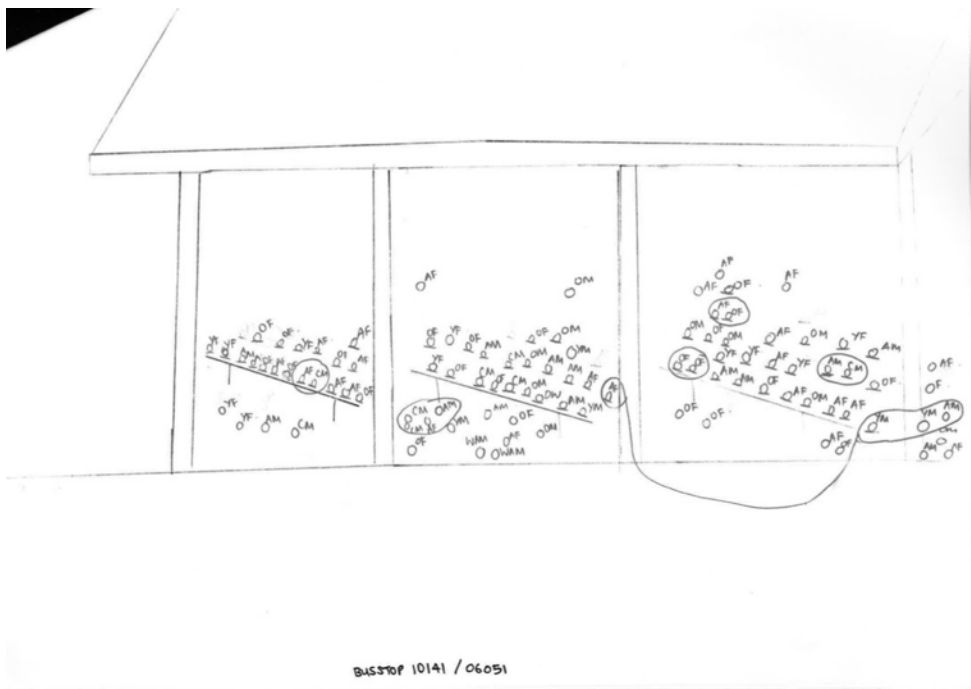
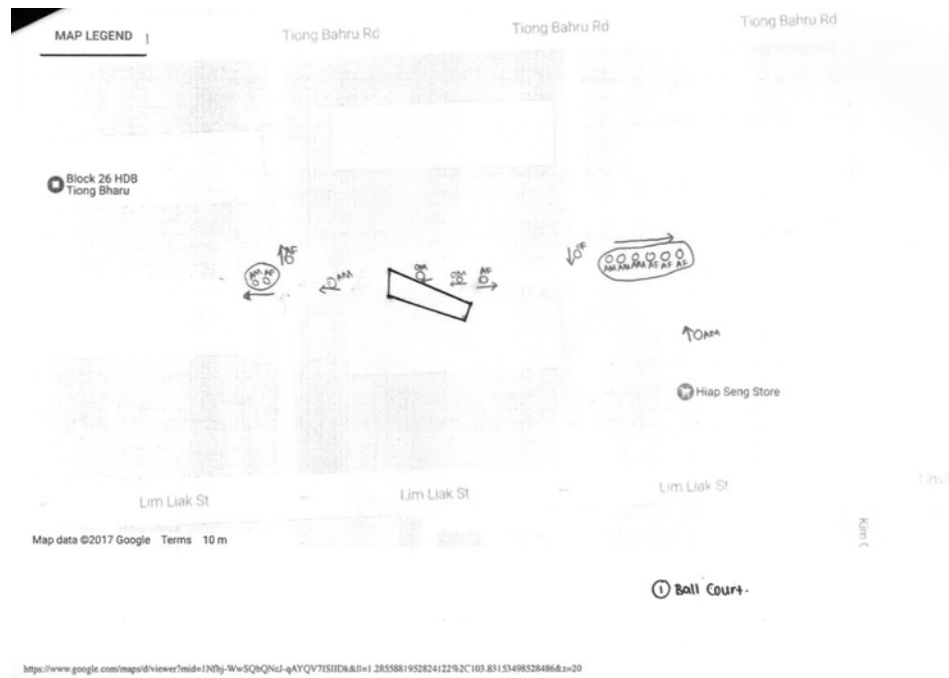
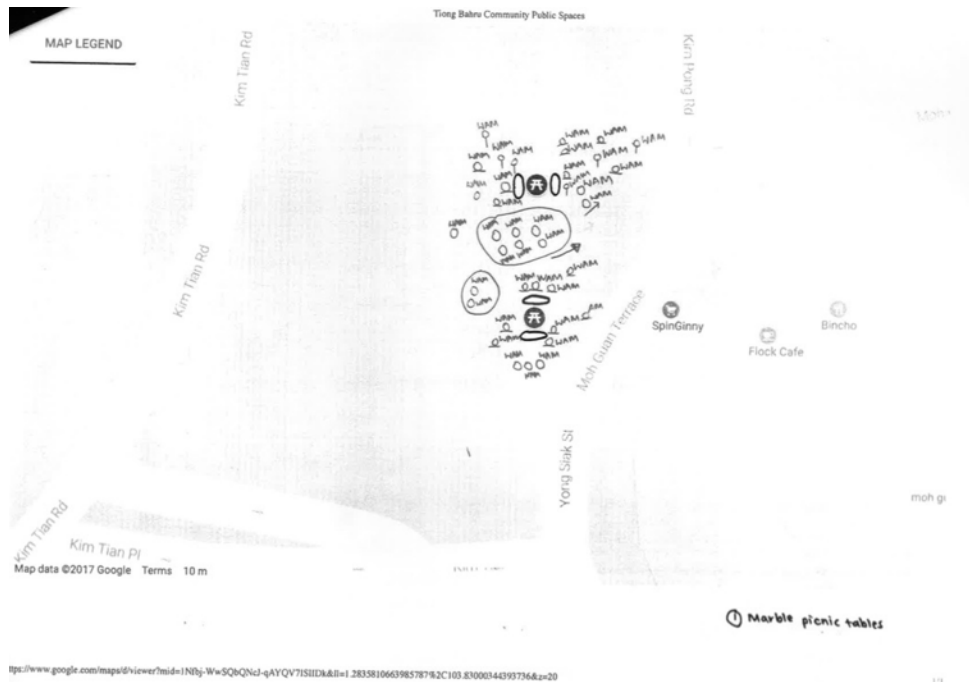


FIGURE 4.2 COMPILED STATIC SNAPSHOT OF PEOPLE OBSERVED IN BUS SHELTER 10141 IN A WEEK.

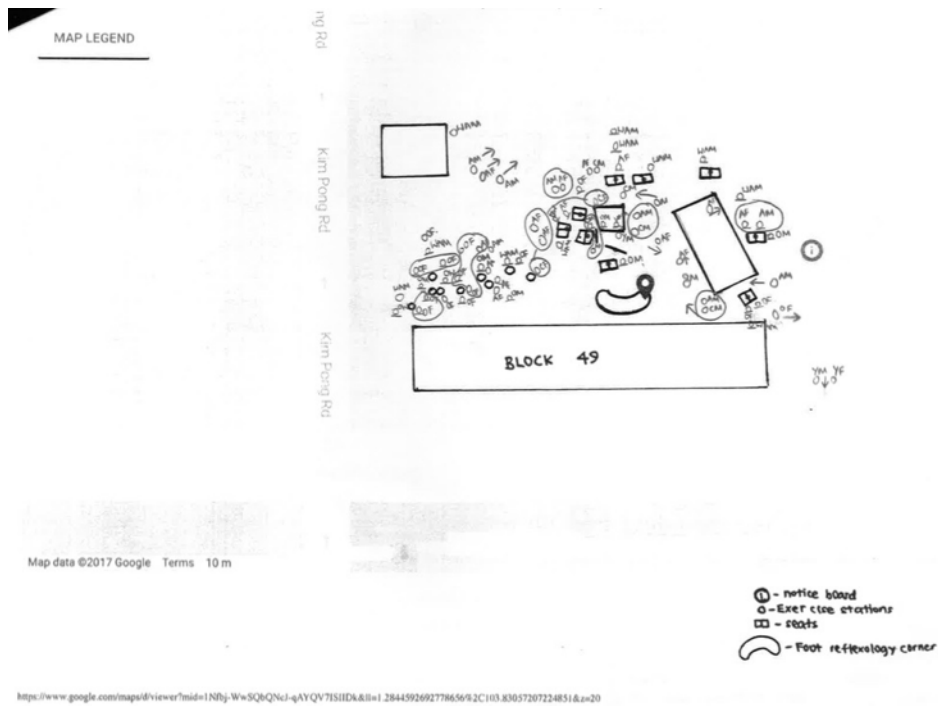


**FIGURE 4.3 COMPILED STATIC SNAPSHOT OF PEOPLE OBSERVED ON PUBLIC WALKWAYS OF POSTWAR FLATS IN A WEEK.**



**FIGURE 4.4 COMPILED STATIC SNAPSHOT OF PEOPLE OBSERVED IN AREA WITH PUBLIC TABLES IN A WEEK.**

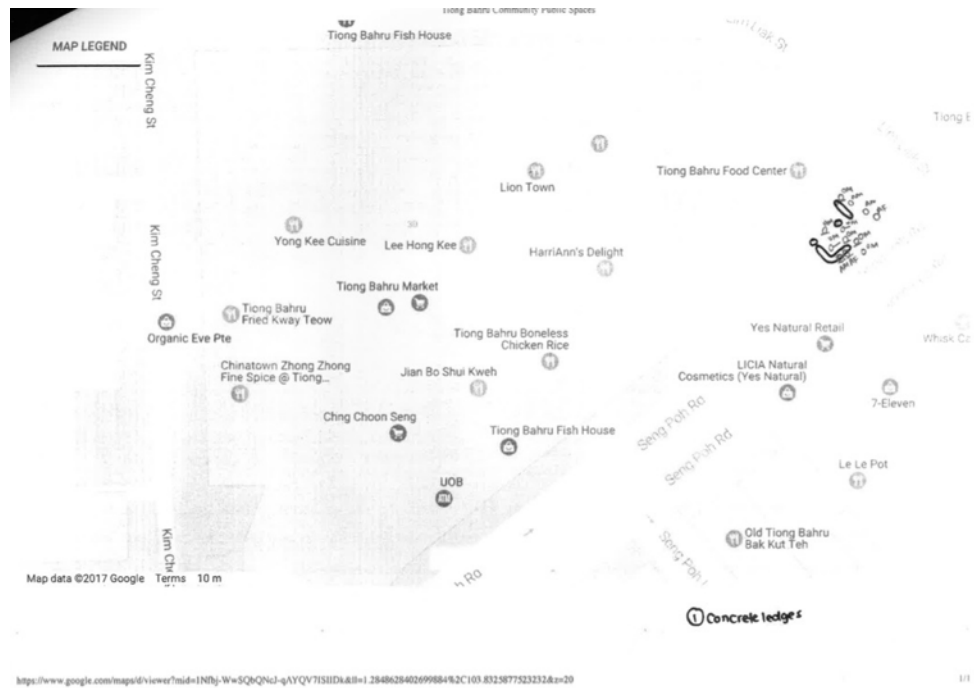




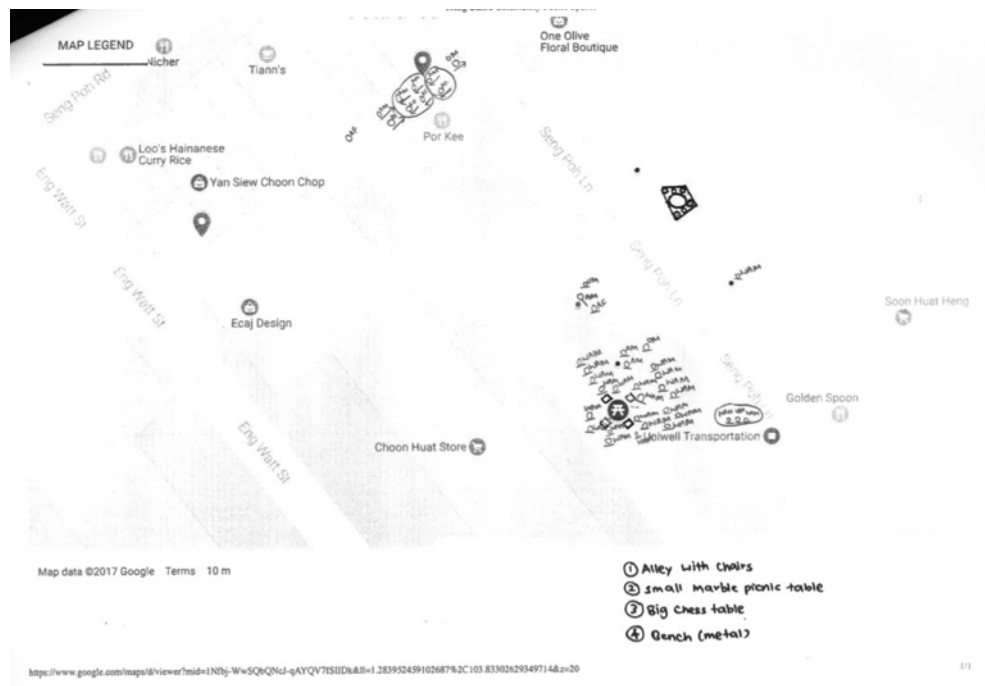
**FIGURE 4.5 COMPILED STATIC SNAPSHOT OF PEOPLE OBSERVED IN THE MULTIGENERATIONAL PLAYGROUND FACILITY IN A WEEK.**



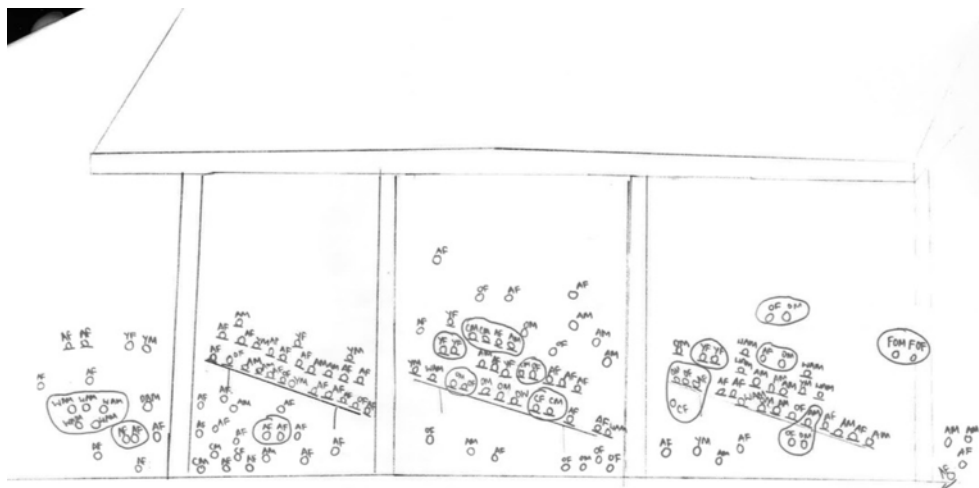
**FIGURE 4.6 COMPILED STATIC SNAPSHOT OF PEOPLE OBSERVED IN SENG POH GARDEN IN A WEEK.**



**FIGURE 4.7 COMPILED STATIC SNAPSHOT OF PEOPLE OBSERVED ON CONCRETE LEDGES OUTSIDE TIONG BAHRU MARKET IN A WEEK.**



**FIGURE 4.8 COMPILED STATIC SNAPSHOT OF PEOPLE OBSERVED IN SENG POH LANE'S BACK ALLEY AND CHESS TABLES SURROUNDING CARPARK IN A WEEK.**



BUS STOP 10141 / 06051

FIGURE 4.9 COMPILED STATIC SNAPSHOT OF PEOPLE OBSERVED IN BUS SHELTER 06051 IN A WEEK.

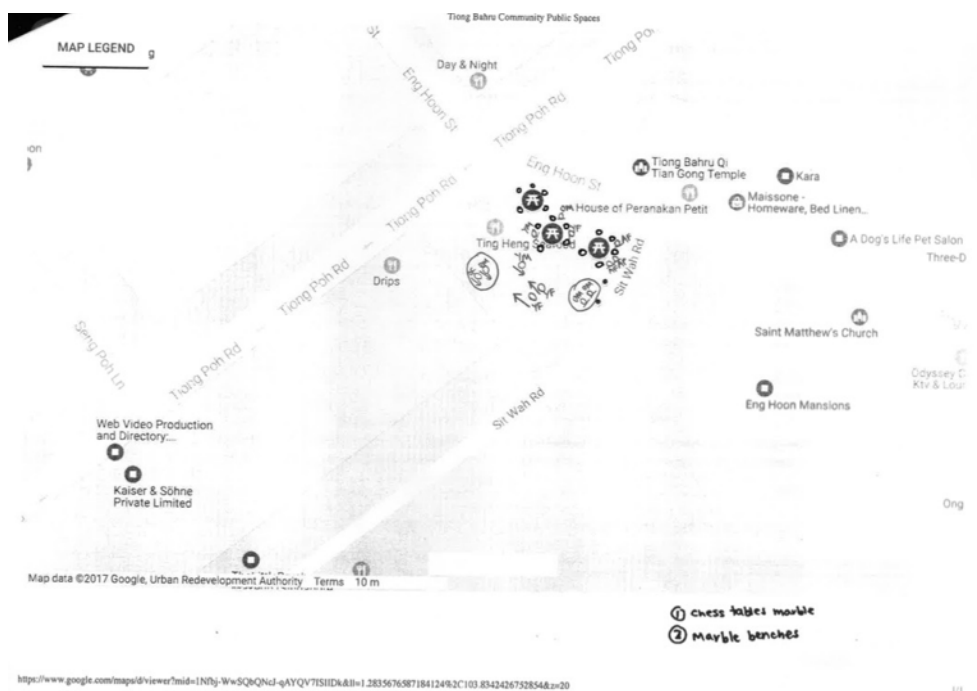


FIGURE 4.10 COMPILED STATIC SNAPSHOT OF PEOPLE OBSERVED IN CHESS TABLES AND BENCHES NEAR SIT WAH ROAD IN A WEEK.



FIGURE 4.11 COMPILED STATIC SNAPSHOT OF PEOPLE OBSERVED IN OLD CC (1ST FLOOR) BUILDING IN A WEEK.

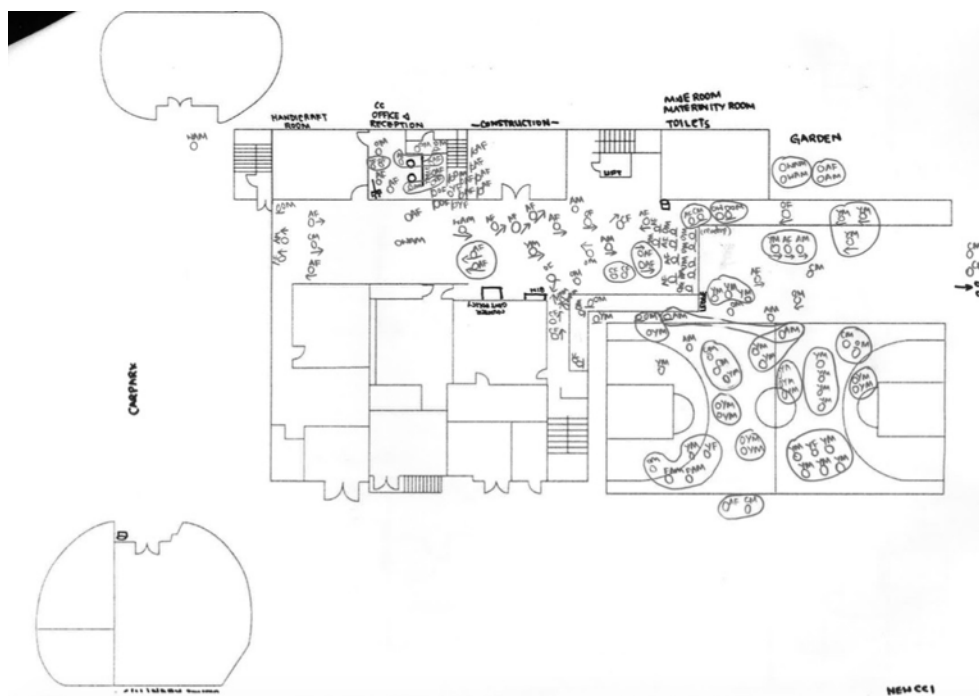
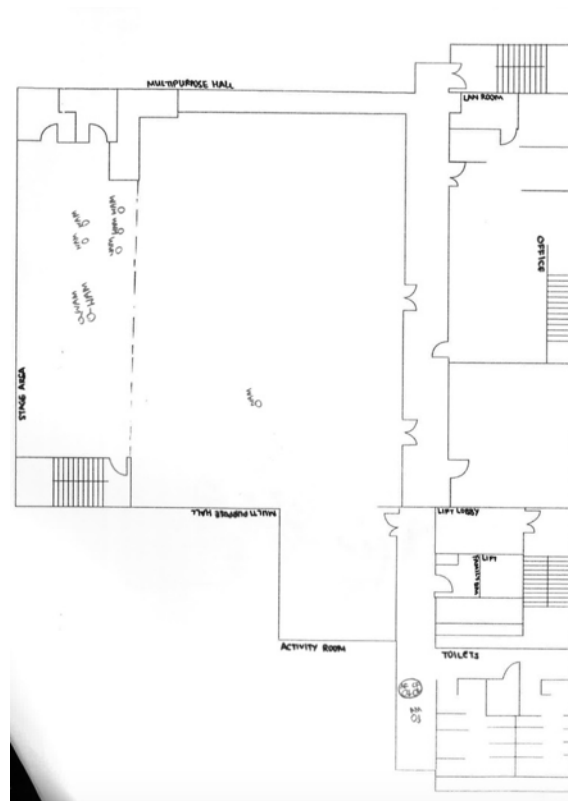


FIGURE 4.12 COMPILED STATIC SNAPSHOT OF PEOPLE OBSERVED IN NEW CC (1ST FLOOR) BUILDING IN A WEEK.



**FIGURE 4.13 COMPILED STATIC SNAPSHOT OF PEOPLE OBSERVED IN NEW CC (2ND FLOOR) BUILDING IN A WEEK.**

The following tables (Table 1 and 2) provide relevant information about the qualitative data, both observation and interviews, that were collected. It also provides a summary of the qualitative data in order to give an idea of the type of the data that was collected. A sample of each type of qualitative data collected can be found in the Appendix A and B. As the raw data was sorted out into different concurring themes, Table 3 provides the final list of codes that the qualitative data was sorted into. The data that was collected and analysed will then be used to discuss the themes of the private-public dichotomy, the neighbourhood community and ageing in place, intergenerational spaces and contestations of space between generations in the discussion below, especially in Chapters 5, 7 and 8.

| Observation Date & Time | Purpose of Observation    | Observation Summary                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 December 2016; 1000   | Tiong Bahru Heritage Tour | Learnt about the history of Tiong Bahru, the conservation status of the neighbourhood and the heritage shops that morphed along with urban regeneration and other social changes. The conservation status also meant that lifts could not be installed, and handles and steps have to be installed for the aging population. The observation records the discussion about the lack of lifts for residents during the tour. |

| Observation Date & Time    | Purpose of Observation                       | Observation Summary                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 22 March 2017; 1400 - 1600 | Observation Walk                             | Describes the feeling of being an outsider in the neighbourhood. It also points out that the thunderstorm caused people to hide in shelters or use quasi-public spaces as public spaces.                                                                                                                                                                                                                                                              |
| 23 March 2017; 1430 - 1500 | Observation Walk                             | Described interactions with two elderly ladies who shared their seats and shared their life values with me.                                                                                                                                                                                                                                                                                                                                           |
| 24 March 2017 1500 - 1700  | Event: Coffee Corner Participant Observation | Described the participants I met at the event- the elderly residents, an adult male, and a domestic worker. Recorded the interactions with the several elderly residents at the event. Recorded the palm therapy lesson that happened during the event, and what the language of the lesson should be was determined by my presence.                                                                                                                  |
| 25 March 2017 0700 - 1900  | Observation Walk                             | Recorded interactions with an elderly stranger, and the temporary fruit stall set up in the morning. Noticed the afternoon crowd was mainly young visitors visiting cafés, and the evening was when the restaurants open. This is where the change of territories in public space was noted. The tension between tourists and residents was also observed.                                                                                            |
| 26 March 2017 0700 - 1900  | Observation Walk                             | Recorded my interactions with Eddy and some elderly residents in the morning. Noticed visitors to the cafés, and the same people sitting in the same areas in the afternoon, or marking their territories in public spaces. Recorded a fight between a cyclist and a driver in the evening. Recorded the intergenerational interactions between strangers over a game of basketball.                                                                  |
| 27 March 2017 0700 - 1900  | Observation Walk                             | Recorded the physical segregation of foreigners and elderly in Seng Poh Garden in the morning. Noted the differences in the timings and how age groups used the space. The heavy downpour in the afternoon meant that the only public spaces available for use were the sheltered areas. In the evening, it was observed that the CC was full of activity and strangers were bonding over basketball. The restaurants marked their territory as well. |
| 28 March 2017 0700 - 1900  | Observation Walk                             | The feeling of being an outsider, the body of researcher in the field and noticed by the residents and shop keepers in the morning. Observed an elderly lady going around talking to her neighbours in the afternoon. Noted more diversity (diverse nationalities and age groups) for the basketball games in the CC in the evening.                                                                                                                  |
| 28 March 2017 2000 - 2200  | Event: Karaoke Night Participant Observation | Recorded my interactions with my gatekeeper, a few friendly, older ladies who came and talk to me, and a few men who were more active in the RC activities. The main observation(s) that were noted down were the language barriers experienced, generational expectations of social etiquette and the learning of bodily functions from the elderly's perspective.                                                                                   |

| Observation Date & Time      | Purpose of Observation | Observation Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 29 March 2017<br>0700 - 1900 | Observation Walk       | Recorded my interactions with several residents in the neighbourhood in the morning, where I felt more like an insider. Eddy also recommended me food places when I bumped into him. In the afternoon and evening, young visitors, "pop-up" fruit stalls and their activities in Tiong Bahru were observed. The basketball game in the CC was also recorded in the observation log.                                                                                                                                                                                               |
| 30 March 2017<br>0700 - 1900 | Observation Walk       | Noted my shock at a nearly naked man standing in a public place (that he deemed as his private space), and recorded a fight between a foreign cyclist and local pedestrians in the morning. As it was raining in the afternoon, most residents in their homes. It was also noted that the frailer/ disabled elderly residents has difficulties navigating through their neighbourhood environment, especially in bad weather. There were young children with their parents imitating the actions of those who were playing the basketball in the CC buildings during the evening. |
| 31 March 2017<br>0700 - 1900 | Observation Walk       | Described my observation of the exercise class in Seng Poh Garden, and discomfort in walking through shops that extend their shops to public spaces. Described the change in crowd in the afternoon. Recorded the interactions when between me, residents and a RC helper that was setting up a temporary children's play set.                                                                                                                                                                                                                                                    |

**TABLE 1 SHOWS A PURPOSE OF OBSERVATION AND BRIEF SUMMARY OF THE OBSERVATIONS DONE IN TIONG BAHRU.**

| Interview Date   | Name (Pseudonym) | Length of Residence               | Residential Activity                                      | Interview Summary                                                                                                                                                                                                                                                                                                                                  |
|------------------|------------------|-----------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 22 December 2016 | Mariah           | > 50 years (no longer a resident) | Used to help with Resident's committee (RC)'s activities. | Although Mariah was no longer a resident, she was able to reflect on the changes in landscape and the community then and now, since she still frequents the neighbourhood often. She was also very eager to share her knowledge about the history, community and her days as a 3rd generation resident and her involvement in the RC's activities. |
| 21 February 2017 | Mary             | > 20 years                        | Helps with RC activities.                                 | Mary's first interview was one that mainly described the estate, its surroundings, general events and its social changes. Due to time constraints over the telephone, a second interview was held.                                                                                                                                                 |
| 23 March 2017    | Mary             | > 20 years                        | Helps with RC activities.                                 | Mary's second interview gives a better understanding to her daily routines in the neighbourhood, life and why she chose to be involved in the RC activities. It also gives extensive information on the friendships that were forged around the neighbourhood.                                                                                     |

| Interview Date | Name (Pseudonym) | Length of Residence | Residential Activity         | Interview Summary                                                                                                                                                                                                                                                                                                                                                                             |
|----------------|------------------|---------------------|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 24 March 2017  | Eddy             | 10 years            | Participates in RC event(s). | Eddy mainly talked about his contributions: how he contributes to his household by helping with errands, and contributes to society by volunteering at places i.e. an elderly home near Tiong Bahru. He talks about travelling to other places in Singapore, and tries to share his life values during the interview. The interview reflects Eddy's strive for continuity in his life course. |
| 24 March 2017  | Sally            | > 50 years          | Participates in RC event(s). | Sally expresses her delight staying in the neighbourhood. Her joy mainly comes from the friends and family that she is able to see often. Although she finds that the people in the neighbourhood are generally great, she also expresses her discomfort in interacting with her neighbours as she does not trust them.                                                                       |
| 24 March 2017  | Lana             | > 50 years          | Helps with RC activities.    | Lana shared about her early years as a resident in Tiong Bahru and how she came to be involved in the resident's activities. She also shares about her life values, and her friendships and interactions with her different neighbours.                                                                                                                                                       |

**TABLE 2 SHOWS THE BASIC INFORMATION ABOUT THE INTERVIEWEES AND THE BRIEF SUMMARY OF INTERVIEW CONTENT.**

| Name                      | Groundedness | Comment                                                                                                                                                                                                     |
|---------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Clashes and Tensions      | 37           | The conflicts, and tensions within the neighbourhood.                                                                                                                                                       |
| Community Spirit          | 153          | How people in a community behave, interact with one another.<br>Merging of the codes: Community and Sense of Belonging                                                                                      |
| Contribution              | 64           | Help given to the family, neighbours, or general public.                                                                                                                                                    |
| Daily Independence        | 48           | Exercising independence in daily routines e.g. getting food, going to places.<br>Merge of codes: Daily Routines, Routines in Tiong Bahru, by yourself, by myself, alone.                                    |
| Damage of Public Property | 8            | Merge of codes: Littering, Vandalism                                                                                                                                                                        |
| Ease of Access            | 51           | 1) How easy it is for people to get to Tiong Bahru, or vice versa. 2) How easy is it to get from home to destination, or vice versa. Merge of Codes: Mobility, Accessibility, No lift, Staircase, Proximity |
| Family                    | 25           | The relationship that participants describe they have with their family, or lack of.                                                                                                                        |
| Foreign Residents         | 32           | Describes residents in Tiong Bahru who are not local e.g. expats, or domestic workers.<br>Merge of codes: Foreign, Foreigners, Expat, Expats.                                                               |



| Name                         | Groundedness | Comments                                                                                                                                                         |
|------------------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Friends                      | 42           | When participants describe their relationship with their friends, or lack of.                                                                                    |
| Intergenerational            | 68           | Describes the bonds and interactions between generations.                                                                                                        |
| Livability in Tiong Bahru    | 74           | Participants describe their experience of living in Tiong Bahru. Merge of codes: comfortable, private, quiet, ambience.                                          |
| Loneliness                   | 17           | Describes the emotions of the elderly who feels lonely.                                                                                                          |
| Multigenerational            | 46           | Describes how generations are within the same space/ place.                                                                                                      |
| Neighbourliness              | 91           | Interactions between neighbours. Merge of codes: Neighbours and bonding                                                                                          |
| Participation                | 53           | Describes if the residents do participate in the events or activities that are available.                                                                        |
| Private-Public Spaces        | 52           | 1) Quasi-public spaces like cafes, restaurants etc. which are privately owned. 2) Blurring of private-public boundaries                                          |
| Public Neighbourhood Spaces  | 121          | Merge of codes: Bird corner, bus shelter, cafes, coffeeshops, community center, corridors, flea market, garden, market, playground, playsets, restaurants, road. |
| Reachability                 | 27           | Describes the ability of the RC and CC to reach the residents.                                                                                                   |
| Territories in Public Spaces | 24           | Marking of territories by individuals or organisations.                                                                                                          |
| Urban Regeneration           | 33           | The effects of conserving, redeveloping and marketing Tiong Bahru as a hipster place and tourist attraction. Merge of codes: Modern, Rent, Conserved.            |
| Visitors to Tiong Bahru      | 35           | Merge of codes: Hipsters and Tourists                                                                                                                            |

**TABLE 3 FINAL CODES FROM THE ANALYSIS OF QUALITATIVE DATA, GENERATED BY ATLAS.TI.**

## **5 Public Neighbourhood Spaces of Interactions in Tiong Bahru**

Through literature (Chapter 2) and planning the static snapshot route (Chapter 3), the hypothesised public neighbourhood spaces that promote interactions between residents were as followed: the market, the community center, Seng Poh Garden, playgrounds, bus shelters, walkways, picnic benches and concrete ledges that are located around the neighbourhood. However, it should be noted that the market was closed for a three-month renovation work during the time when observation was carried out (Lam, 2017; Channel News Asia, 2017). The community center's two buildings were also undergoing facelifts and renovation works, resulting in lesser activities in the space even though it was still open for the public's use (Lin, 2017). The overall observation results showed that besides the hypothesised spaces as public neighbourhood spaces which neighbours interacted in Tiong Bahru, there were other spaces that residents in Tiong Bahru used and interacted in frequently which questioned the dichotomy of 'public' and 'private' spaces and showed that the boundaries between the 'public' and the 'private' were fluid. The spaces of interaction that challenge the dichotomy between 'public' and 'private' are split into two categories based on observations- 1) Blurred boundaries of private and public spaces; 2) Spaces intended for public use that are deemed as private territories belonging to businesses or residents; and 3) Quasi-public spaces such as cafes, shops, restaurants and coffeeshops can also be for public use. This chapter will thus address the fluidity and blurring of public/ private boundaries throughout different times of the day.

### **5.1 Public-Private Fluidity**

During observation, interactions observed between neighbours sometimes showed that the boundaries between public and private spaces were fluid. An explicit example of private-public fluidity in neighbourhood spaces was observed during a casual interaction between two neighbours on a public walkway- when an elderly lady passed by her neighbour's apartment saw that the door was open- with a grilled gate as a barrier - she stood on the public walkway, said hi and chatted with her neighbour. In cases such as this, where interactions occurred in both private and public spaces at the same time, the boundaries and definitions of 'private' and 'public' then become ambiguous.

One of the public neighbourhood spaces of interaction was the resident's committee (RC) office, which was located on the ground floor in one of the housing blocks. However, during walks around the neighbourhood, it seemed locked most of the time unless there was an event, activity or meeting organised. As the RC was the main organiser of the events and activities for the residents during the time this research was conducted, there were NIMBY(Not in my backyard) sentiments by residents nearby. NIMBY-ism thus highlighted the conflict between private and public interests (Hubbard, 2009) mainly because what took place in these temporary public spaces of interaction in Tiong Bahru affected the private spaces of those who lived in nearby apartments. This was mainly because noise levels produced from these events such as karaoke night organised by the RC and setting up a temporary children's play set were an inconvenience to some of the nearby residents. These noises from the public space of the events or activities organised by the RC were thus a main source of complaints from the residents as it affects their daily lives in their home space.

“...when organising a karaoke within the neighbourhood, and in a non-sound proof environment, we also have to keep a lookout on the noise levels because sometimes the neighbours have complained that it is noisy.” (Mary, Interview, 23 March 2017)

“When we set up the play sets, the children will be really happy. But you know children being children, they get excited, and then they will scream, so this provokes the other residents who are living near the RC. They will complain to the RC, and tell us things like “Get it out of my area, can't you put it somewhere else, like next door?”” (Mary, Interview, 23 March 2017)

## **5.2 Private territories in Public Spaces**

Besides the examples of public spaces affecting the comfort in private spaces, the blurring of the public-private boundaries also occurred when businesses or individuals reclaimed a specific public location as their own, especially during the same timings everyday. Businesses such as restaurants, coffeeshops and fruit stalls have ‘claimed’ the space as theirs not only by placing their furnitures and cutleries in public spaces but these territories also changed with

the time of the day. For example, during mornings and afternoons, the temporary fruit stalls and some coffee shops had set up their furniture on public walkways. During evenings and nights, the walkways and chess-tables eventually became territorialised by restaurants. When passersby and myself who walked through the supposedly public walkways where their furnitures were placed, business owners would usually welcome and ask passersby if they would like to order anything or look at the menu. As I eventually became a familiar face carrying my research notes during my static snapshot walks, most businesses knew that I was not a patron, but just a regular passerby. Carrying notes also caused me to be eyed curiously or suspiciously by the restaurant staff. This was also evident from the fruit store owner who “always seem [sic] to eye at me warily when I walk [sic] past them carrying a piece of paper and pen” (Observation, 29 March 2017). The fact that private businesses welcomed passersby and felt wary when passersby or myself walked through the public walkway where they had set up their businesses showed that they had reclaimed and territorialised the space of the walkway. These private territorialisation of public spaces however also functioned as spaces of interactions, especially if it boosted their business opportunities, since it was observed that a few groups of elderly usually sit around to chat with each other and the temporary fruit store owners while sitting on the chairs that were set up by the store.

Not only did businesses claim the public space as theirs, but public spaces such as walkways and gardens situated next to the blocks were also ‘claimed’ by the residents themselves. It was evident from Figure 5.1 that the garden was one that belonged to the community to encourage the participation of residents. However, from the observation sessions, these spaces seemed like they were mainly maintained by the first floor residents who lived next to it. This pattern of having a main ‘gardener’ in the community garden is also reflected in Tan and Neo’s (2009) research, where other residents were not even aware they are able to help maintain the garden, leading them to distance themselves from the garden plots. Furthermore, in Figure 5.2 (a) and (b), potted plants, short fences and decorations were also placed around the plots of community garden, seemingly to demarcate the territories as ‘private’. The fluidity of the public and private space in the community garden plots was also evident when an elderly man living next to the community garden was standing in the garden, wearing nothing but a small towel on, stared at me when I was passing by one morning. It seemingly felt as though as I had intruded into his private moment by trespassing on what seemed to feel like his property, even though it belonged to the public. The idea of ‘private’ ownership over community

gardens is not only limited to the Tiong Bahru itself, but also surfaced in other studies of other community gardens in New York and Singapore- where territories are determined by gates, fences, or even locks (Aptekar, 2015; Tan and Neo, 2009). Despite the fact that these spaces were ‘private’ territories for the ground floor residents, it was observed that community garden plots also served as spaces for interactions between neighbours as residents would chat with each other while at the same time maintaining their gardens. This is again similar to the results produced by Aptekar (2015) and Tan and Neo (2009) where the residents have more opportunities to meet each other in public neighbourhood spaces. It is thus evident that the community garden plots helped to facilitate civil, everyday encounters between the residents.

“... she was also friendly with her other neighbours as she greeted an elderly man ‘hello’ when he was out watering his plants. He also greeted her back.” (Observation, 28 March 2017)



**FIGURE 5.1 COMMUNITY GARDEN'S SIGNBOARD.**





(b)

**FIGURE 5.2 PRIVATE TERRITORIES MARKED BY (A) FENCES AND POTTED PLANTS, (B) DECORATIONS AND POTTED PLANTS IN PUBLIC COMMUNITY GARDEN PLOTS.**

Besides the plots of community garden, the public walkways located next to each blocks also became private back yards for the residents. While the walkway was still a public space, placing belongings in the back yard gave pedestrians a sense that the walkway was a private space for the residents. During my observation sessions, it was evident that most residents seemed to place their belongings on their front yard, as evident from Figure 5.4 (a) and (b). Most pedestrians observed would thus mostly choose to walk in the middle walkway (shown in Figure 5.5). Thus, the boundaries begin to blur between the private home space and the public walkway space. Such blurring of boundaries by placing personal belongings in the corridors are quite common in Singaporean housing apartments as a study by Yong (2012) also shows that corridors of apartment blocks in Singapore are often “reterritorialised” (Yong, 2012; 55) and “personalised by residents” (Yong, 2012; 51) when they place their personal items such as plants, shoe racks and religious items there. The only people observed walking along the backyard walkways were residents who were living in the same block, when they were rushing to commute to and from work. Although it was not gated, a shelter- along with the owners’ personal furnitures- were set up as a comfortable, sheltered space as seen in Figure 5.3. It most likely belonged to an elderly couple as the observation on 26 March 2017



stated that they were usually sitting there, while their neighbours would often pop by to sit on their chairs and chat with them.



**FIGURE 5.3 SHELTERED BACKYARD OF THE ELDERLY COUPLE RESIDENTS.**



**FIGURE 5.4 (A) AND (B) PUBLIC WALKWAYS WITH PRIVATELY OWNED BELONGINGS.**



**FIGURE 5.5 MIDDLE WALKWAY FOR PEDESTRIANS.**

During the observation sessions, it was also clear that there were two elderly men who had their own private territories in public space and they were always observed sitting alone in the same location almost everyday.

“... trishaw rider who sits at the concrete ledge at the hawker center, another example is a shabbily dressed elderly man with a red shirt and black shorts who sits on a particular ledge at the community center.” (Observation, 26 March 2017)

Besides sitting and lying down on the same location for a few hours almost everyday, the trishaw rider also parked his vehicle next to the ledge that he was always on, even when he was not around. The act of parking his bike next to the ledge while he was not around seemed as though the particular ledge was his territory even though it was a feature of the public space.

### **5.3 Quasi-public spaces**

During the observation sessions, it was clear that many residents also chose to socialise with their friends and families at coffeeshops and cafes that were located in the neighbourhood. In a way, these spaces - cafes, restaurants and coffeeshops - were considered public spaces since



they were open to the public, and depended on the public for profits (Collins, 2009). However, it is crucial to take note that the definition of public space in this thesis is defined as spaces that are owned, controlled by the state and open to everyone. These spaces, also known as quasi-public spaces, thus differ from the public neighbourhood spaces in that they are

“privately owned and controlled, with the management free to invoke the law of trespass to exclude unwanted guests for almost any reason (or, indeed, for no reason at all)” (Collins, 2009; 440).

It is hence interesting to see how these quasi-public spaces do become public spaces for temporary moments.

To at least cover their labour and rent, there had to be some kind of consumption, or transaction patterns in quasi-public spaces most of the time. Thus as the quasi-public spaces in Tiong Bahru were privately owned and controlled, the management had the right to exclude members of the public who were considered to be trespassing. One common example could be excluding guests who were not consuming products from a quasi-public space. This sentiment that one had to consume from the quasi-public space in order to be included in the space was also echoed during an interview:

“Cafes are expensive and those coffee shops are paying rental of \$5000-\$6000 a month, you think they will just let you sit there and just have a drink? They have got people who are buying food and sitting there and tabao-ing.” (Mariah, Interview, 22 December 2016)

This sentiment was however made an exception when elderly ladies carrying huge bags of groceries were observed chatting on a café’s seats in order to wait out a thunderstorm on a Thursday afternoon. During the observation, it was evident that the ladies did not purchase anything from the café. It was most likely the stormy weather and lack of patrons on a weekday afternoon that enabled the cafe management to allow the space for temporary public use.

## **5.4 Conclusion**

This chapter thus aims to answer the research aim “Where are the public spaces of interaction in Tiong Bahru?” by presenting what was observed during the observation walks. Besides the public spaces of interactions that were discussed and hypothesised in chapter 2 and 3, this chapter also discusses alternative spaces of interaction due to the fluidity of the public and private spaces with ebbs and flows of time. These spaces include 1) the RC office when there are events and activities held; 2) temporary fruit stores set up on public walkways; 3) community gardens; 4) walkways next to community gardens; and 5) quasi-public spaces such as coffee shops and cafes. From the observations, it was clear that the concept of private and public space “cannot be neatly characterised as one or the other”, since by simply identifying the owner of the space merely describes the site’s interests (Collins, 2009; 441).

## **6 Patterns of Encounters and Spatial Patterns**

One of the most notable effects of the built environment on intergenerational encounters during observation sessions is how the sheltered ledges that surround the amphitheatre (Figure 6.1) in Seng Poh Gardens were observed to be natural segregations. This caused the different generational groups to utilise different spaces of Seng Poh Garden at the same time, as evident from Figure 4.6. Figure 4.6 shows that the open space within the ledges is a space where most of the elderly are, while the spaces around the ledges in the garden are usually recorded to be utilised by the adults, most who are (foreign) workers from the nearby construction sites.



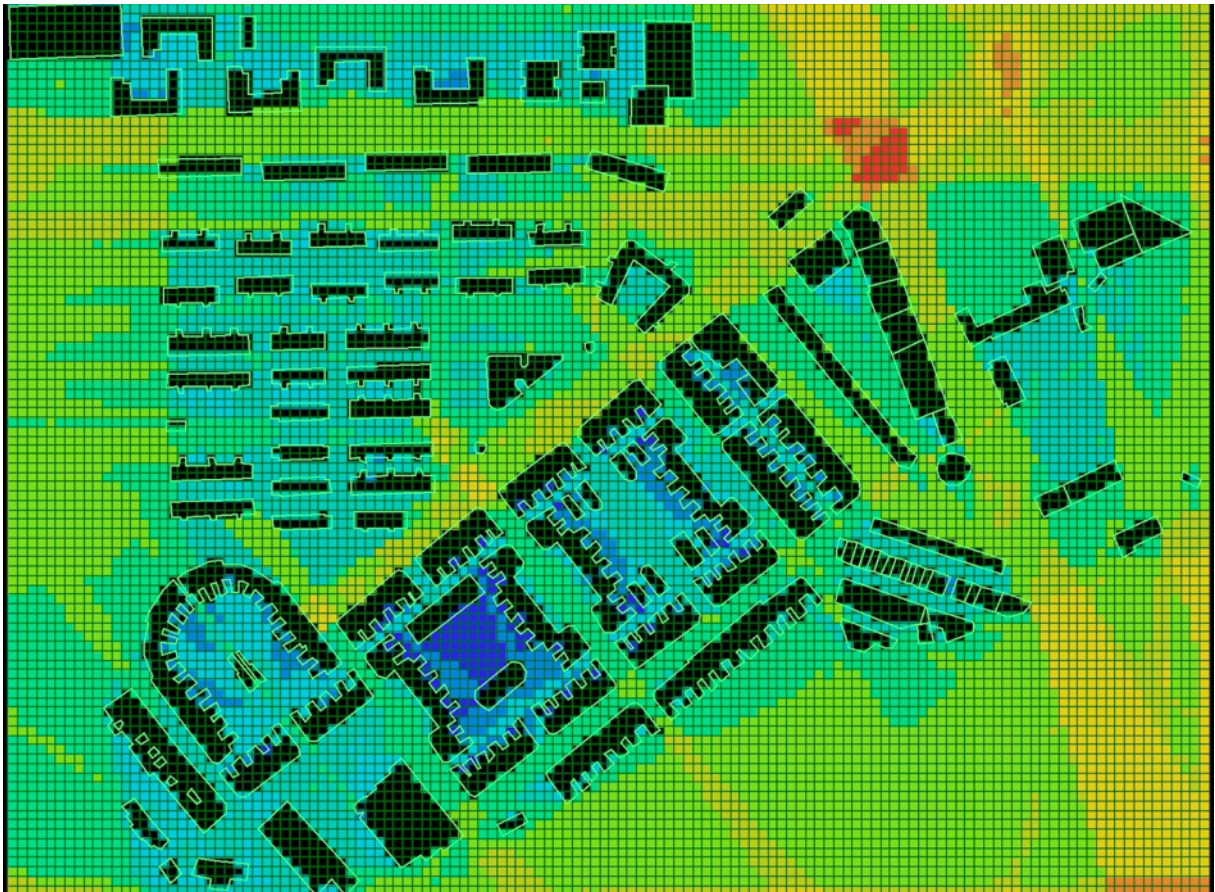
**FIGURE 6.1 SEGREGATION BETWEEN OPEN SPACE AND BENCHES IN SENG POH GARDEN.**

However, in order to be able to truly explore how spatial patterns influences how people encounter each other in space, this research have chosen to adopt the use of space syntax as a way to analyse these patterns and influences (Hillier et al., 1976; Penn and Turner, 2001). This chapter will thus describe and explain the results from the VGA, axial analysis, and the agent-release simulation. Each section will then compare it with the compiled data from the static snapshot plans to check if the data reflects the socio-spatial patterns that is reflected in the Tiong Bahru neighbourhood. The patterns and anomalies will then explain how urban and built space affects social encounters and interactions in space.

## **6.1 Visibility Graph Analysis (VGA)**

The VGA essentially measures how visible and integrated every point is from other points, by measuring the number of visual steps, including changes in directions, it takes to get from one grid to any other grid(s) in the analysed area (Turner, 2004; van der Hoeven and van Nes, 2014). From Turner's (2004), van der Hoeven and van Nes (2014)'s papers, it is clear that the VGA is a good indication of how people orientate through space since visibility in space is supposed to help us better understand the space and this understanding thus influences people's movements in space (Varoudis and Penn, 2015; Hillier and Hanson, 1984).

To interpret the VGA, the most integrated areas, i.e. the least need to change directions to get to that area, are coloured red. The least integrated areas, where you need to the most change of directions, are coloured dark blue. This means that the areas that are red have optimal orientability. From Figure 6.2, the most integrated space in the neighbourhood (yellow colour) is the main road, Seng Poh Road, that cuts across the neighbourhood. As the market is located along this road, it is one of the most integrated and easily orientable public neighbourhood spaces. In comparison to other public spaces such as Seng Poh Garden and the 3G-playground facilities, the routes and walkways that are linked to bus shelters 10149 and 10141 were also reflected to be more integrated. The least integrated space in the neighbourhood is the Tiong Bahru CC buildings.

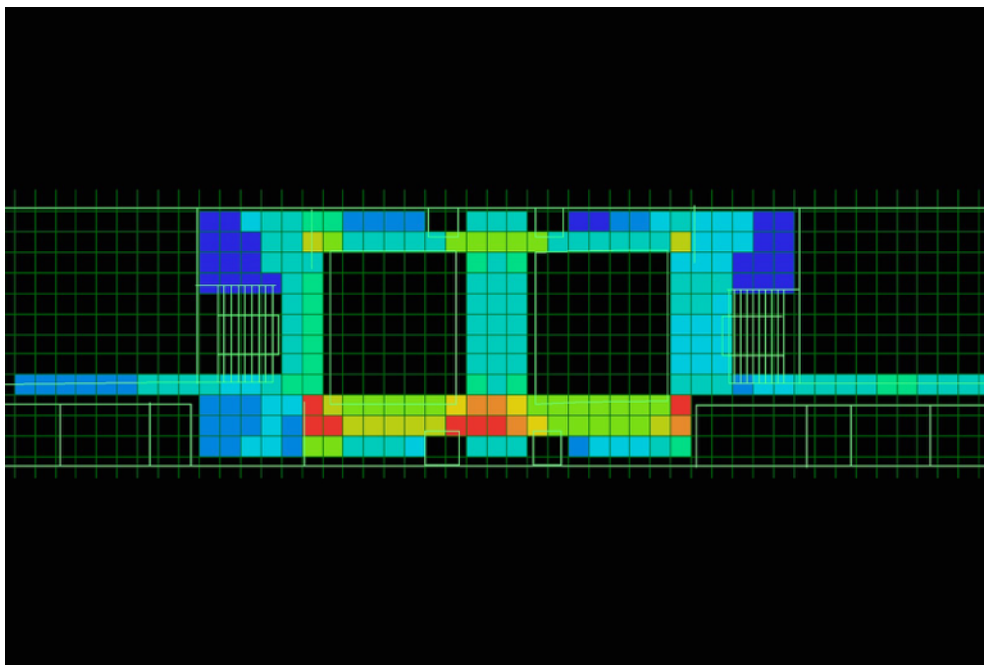


**FIGURE 6.2: VGA OF TIONG BAHRU NEIGHBOURHOOD.**

As the market was closed for renovations during the period of observation, the data collected during the static snapshot observation showed that there was little traffic and pedestrians around in the area. However, based on literature, interviews and past observation visits when



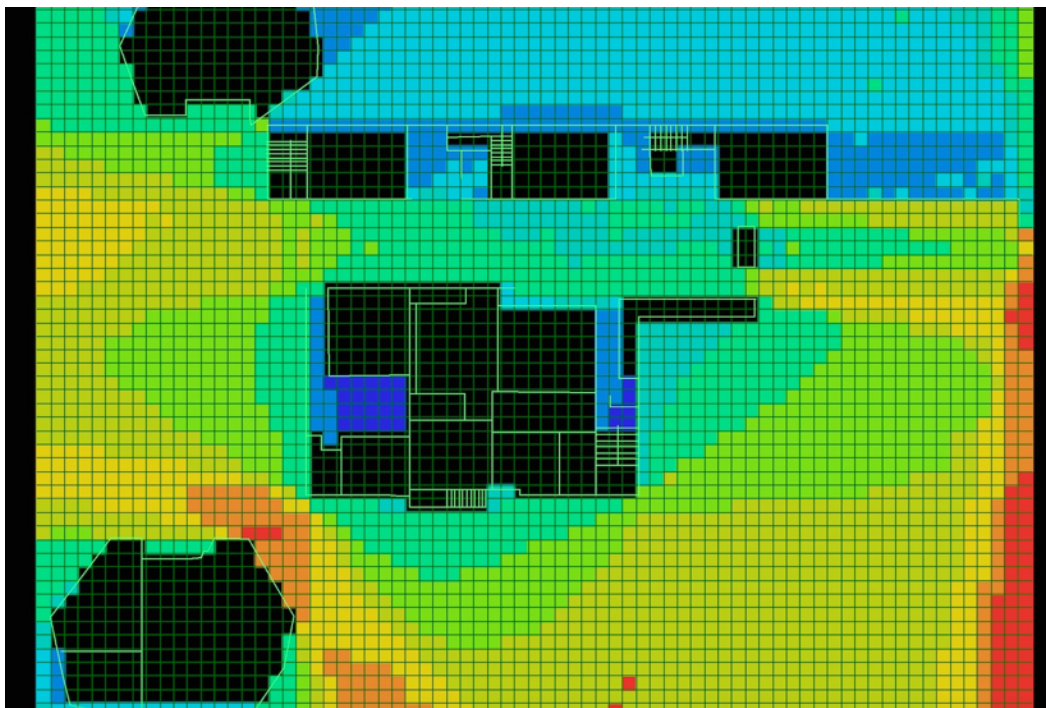
the market was open, the market is indeed the “crowding point” (Mariah, Interview, 22 December 2016) in the neighbourhood. It is also noted that the VGA does not fully reflect what is collected from the static snapshot. One jarring example that the community center’s buildings are reflected as the least integrated space that is the hardest to orientate to in the neighbourhood. Looking at the data, there are quite a number of people recorded walking, sitting, and standing in the space. The reason for this disparity is most likely the fact that most who were at the community center buildings had a purpose to be in that space- either intentionally chose to walk through a sheltered space during rainy or warm weather, had a specific activity there such as visiting the community center’s office, a class, reading the papers or basketball, or were just simply exploring the new building. This is similar to Seng Poh Garden where although the most number of people were recorded in that space, their purpose for being in the garden was mainly because there is a *taichi* lesson that is ongoing in the space every morning, resulting in an anomaly in the number of people recorded in the space. Aside from the morning lessons, the static snapshots also show that the garden is generally quiet at other times when there are no lessons.



**FIGURE 6.3: VGA OF OLD CC BUILDING LEVEL 1.**

From Figure 6.3, the VGA of the old CC building reflects the paths leading to the rooms and toilets to be the area with the most integrated, while the areas next to the staircases are the least integrated. From the data collected, the staircases are the least integrated part of the CC.

For the reason that it might have provided more privacy than other rooms in the building, the entire second floor has been converted to a private childcare and a private art studio for children. However from the data collected, people were only observed in the corridor located in the middle of the building. The reasons for this discrepancy in the data is mainly because the rooms located at the side were only opened and used for classes, rather than open for public use. Even though the toilets are located at each ends of the old CC building, with the completed construction of the new CC building, most people mainly use the old CC building as a sheltered corridor to the new CC building or to Tiong Poh Road, if entering from Seng Poh Road. Furthermore, chairs were only placed along the middle corridor, providing a sheltered resting area. Lastly, at the end of the data collection, the area leading to the rooms and the toilet were blocked off from the public as they were undergoing construction, hence resulting in the discrepancy between the recorded data and the VGA.



**FIGURE 6.4: VGA OF NEW CC BUILDING LEVEL 1.**

Looking at Figure 6.4, the open area surrounding the CC building is the most integrated area as it is represented by red, yellow and green. Within the building, the middle corridor of the CC building is considered the most integrated (greenish-blue) in comparison with the interior of the CC building. The CC office and the lift lobby are represented by lighter blue hues, making these spaces relatively integrated in comparison to the rest of the building. The least

integrated spaces in the CC building are spaces open for public but lodged are in between narrow corridors and classrooms. However comparing the data that was collected, except for the basketball court, the open areas surrounding the CC building are not as integrated as the VGA predicts. This is most likely because the open area next to the basketball court and surrounding the rest of the new CC building is a carpark, meaning that walking through the sheltered space ensures convenience and the safety of the residents. Another difference between the VGA and collected data is the area around the square ledge (represented by the tiny rectangle in the middle corridor), is darker (light blue) than the other areas in the middle corridor in the VGA. In the collected data, the particular ledge is popular among visitors to the CC as it provides them a spot to relax and chat with their friends.



**FIGURE 6.5: VGA OF NEW CC BUILDING LEVEL 2.**

In the VGA for level two of the new CC building, the area that is reflected to be most integrated is the area that is outside a restricted room, represented by red. The next most integrated area is the corridor area near the lift lobby as it is shaded orange. The rest of the corridor remains relatively integrated, and the least integrated area (darkest blue) is a narrow turn from the main corridor. In the recorded data, the area where people are recorded does not match where the most integrated area is located. This is mainly because the most integrated area is outside a locked room- ‘LAN room’ where the public is not allowed to enter.

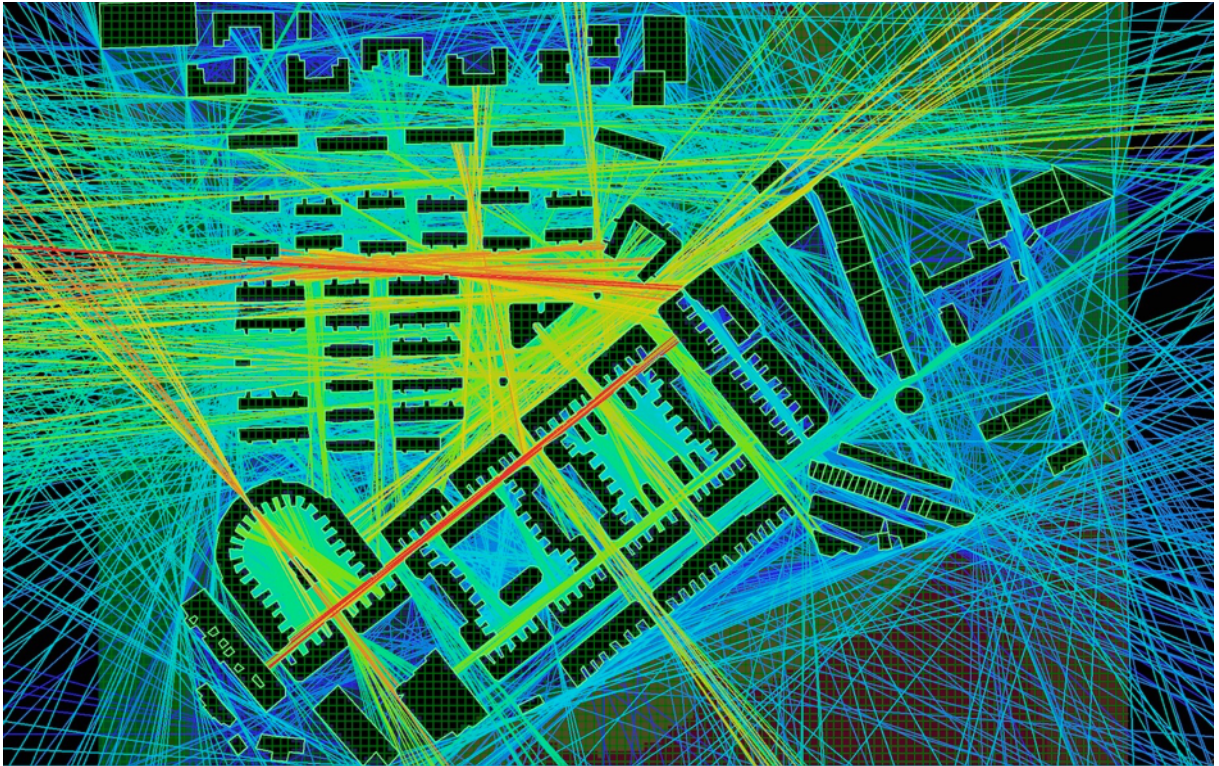
Furthermore, as the rooms on this level is the office and conference rooms, the public generally take a glance at the corridor and go back down to the first level.

## **6.2 Axial Analysis**

The axial analysis represents the longest line of visibility that one has from one point of the building or public space plan to any other point within (van der Hoeven and van Nes, 2014). The red lines represent the highest axis of visibility, while the dark blue lines represent lowest axis of visibility.

While Figure 6.6 seems to generate a slightly different set of results as compared to the VGA (Figure 6.2), there are still some similarities such as the pathways around the market, as well as the walkways leading to the bus shelters 10149 and 10141 were shown to be areas that have the highest visibility. However, the axial analysis also showed that the two pedestrian walkways (one with a small-scale ball court, and another near the restaurants) that were part of the static snapshot route were also routes that have the highest visibility, which was not reflected in the VGA. The axial analysis also showed that the other public neighbourhood areas observed such as the chess tables located at the end of Sit Wah Road, the chess tables in the carpark near the restaurants, 3-G playground facilities and Seng Poh Garden were fairly visible, as reflected from the mixture of yellow, green and light blue axial lines. Lastly, the public area reflected to be the least visible is bus shelter 06051.



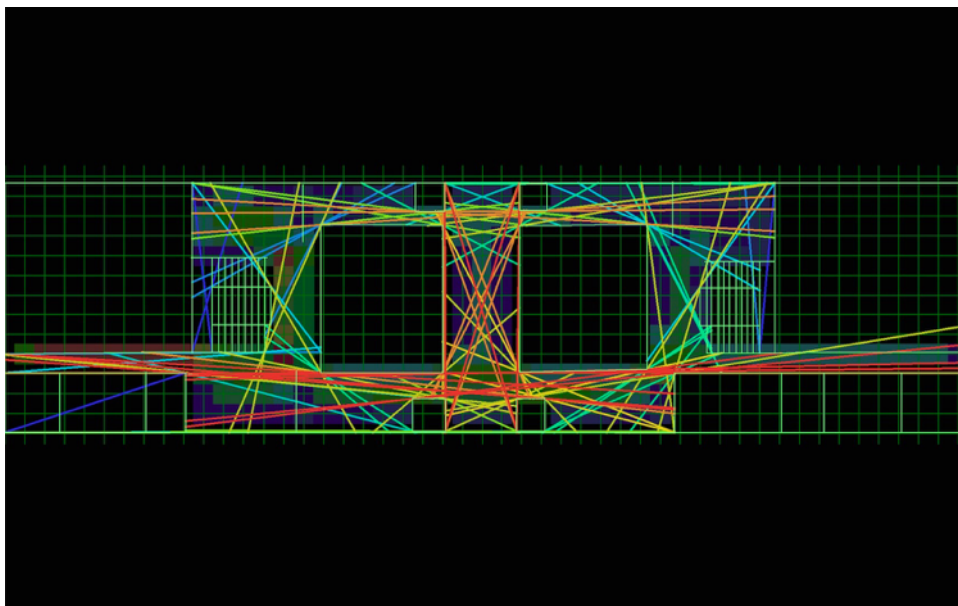


**FIGURE 6.6: AXIAL ANALYSIS OF TIONG BAHRU NEIGHBOURHOOD.**

In comparison to the VGA results, the axial analysis seems to reflect the compiled static snapshot data more- the pathways surrounding the market as well as the two pedestrian walkways is just a straight pathway with nothing blocking, meaning that the visibility is at the highest and it is well integrated into the neighbourhood environment. Although the analysis showed that the routes to bus shelters 10149 and 10141 have the highest visibility in the neighbourhood, this is contrasted with how bus shelter 06051 has the lowest visibility in the neighbourhood. Despite the disparity in visibility levels, the number of people recorded in the three bus shelters are approximately the same, meaning that visibility did not affect the number of people who were in that space. This is mainly because the bus shelters serves a primary function- a marked shelter where people wait for the bus. This primary function means that it is an inevitable destination for residents or visitors if they need to wait for bus. Another anomaly is also the visibility of the public chess tables at the intersection of Eng Hoong Street and Sit Wah Road is considered fairly visible. Although it has a similar visibility to Seng Poh Garden and the 3-G playground facilities, the data compiled shows that it has a significantly fewer amount of people observed as compared to the other two during the observation week. Upon further investigation of the data, the only difference were the number of people who were standing or sitting around, the number of pedestrians (people walking

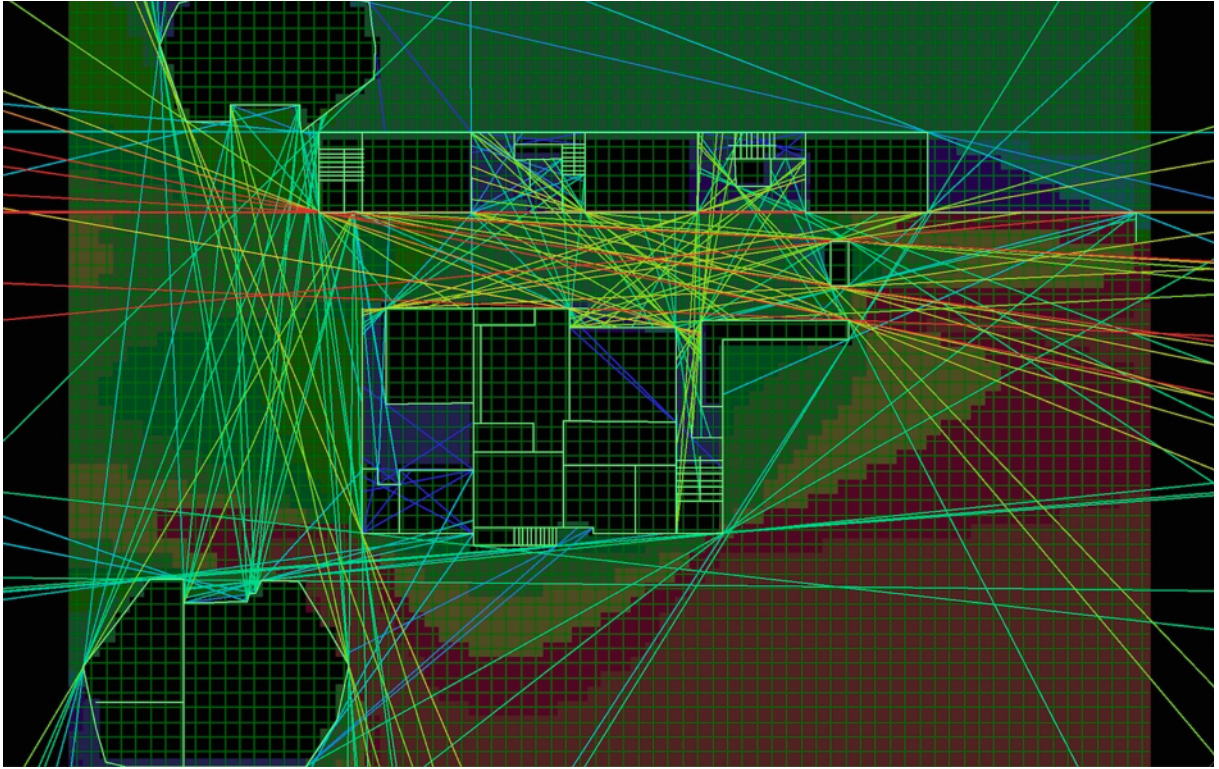
through) these spaces were fairly similar to each other. To elaborate, the number of pedestrians recorded through the week is nine for the 3-G facility, ten for Seng Poh Garden and five for the chess tables. There are significantly lesser people standing or sitting around in that space as compared to spaces such as Seng Poh garden, or the 3-G facility mainly due to the fact that there is no specific activity, such as *taichi* sessions in Seng Poh Garden, that would attract the residents. Furthermore, this space is also territorialised as a private space in the evening by the restaurant next to it (refer to section 5.2).

From Figure 6.7, it is evident that the axial analysis produced similar results as the VGA of the old CC building. Visibility is highest at the paths leading to the rooms and toilets. From VGA, it is evident that the middle corridor also reflects a space with high visibility. The axial analysis of the old CC is thus the most similar to the data that is collected.



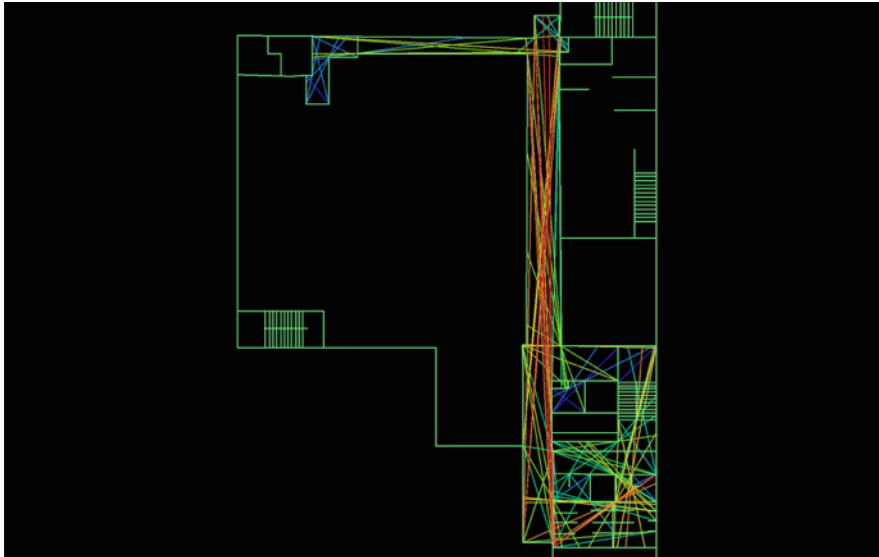
**FIGURE 6.7: AXIAL ANALYSIS OF OLD CC BUILDING LEVEL 1.**





**FIGURE 6.8: AXIAL ANALYSIS OF NEW CC BUILDING LEVEL 1.**

The axial analysis of the new CC building in Figure 6.8 differs from the VGA. The open areas outside the CC building were not really measured. The most visible area was the middle corridor of the CC building, as represented by the red and yellow lines. Unlike the VGA, the narrow corridor next to a garden ledge and classroom (near the stairs) were fairly visible. The visibility of the CC office and the lift lobby were also considered fairly visible as they were represented by greenish-blue lines. Similar to the VGA, the least integrated space in the CC building is the public space between classrooms. Overall, the axial analysis of the new CC building generally reflects the data that was collected.



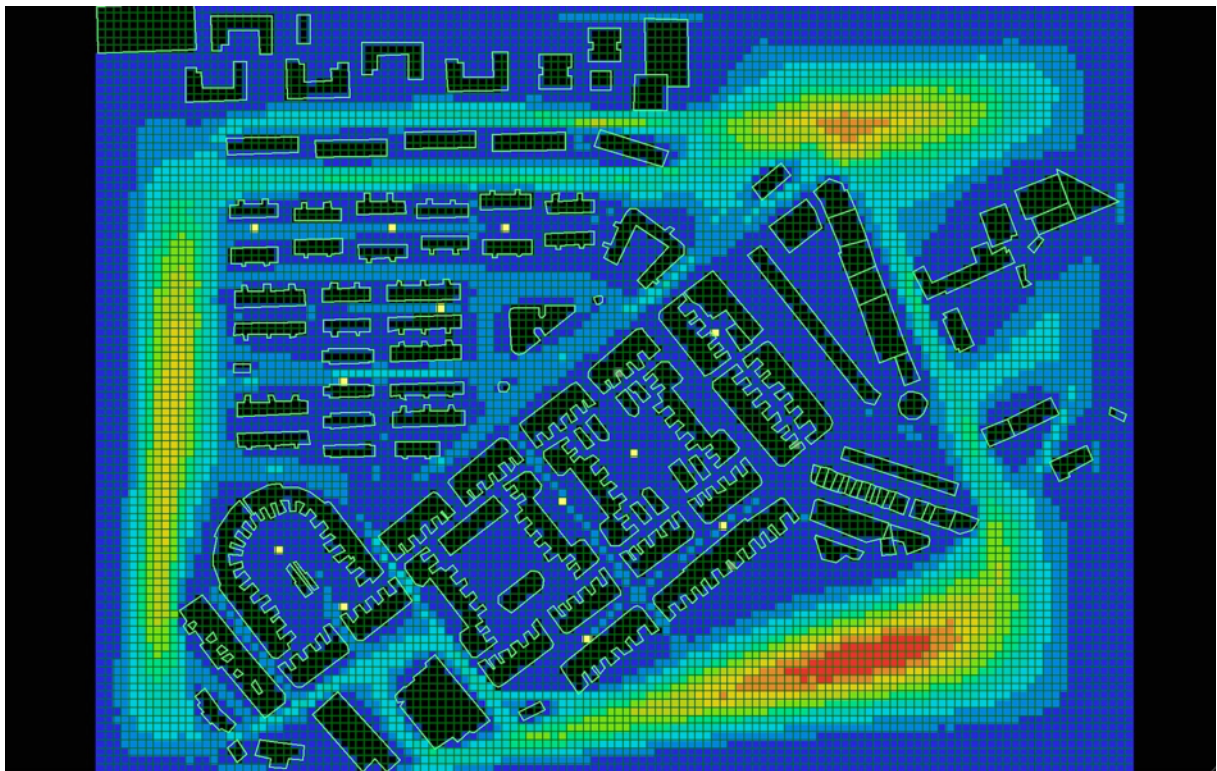
**FIGURE 6.9: AXIAL ANALYSIS OF NEW CC BUILDING LEVEL 2.**

From Figure 6.9, the axial analysis of the new CC building's second floor shows the entire corridor having highest visibility. The narrow turn from the main corridor is relatively visible as compared to the rest of public areas on the second level. The least visible area reflected in the axial analysis is the lift lobby. The fact that this corridor is a small space and has a relatively visibility is one of the reasons that people generally can see that there are only several locked rooms, an office and a multi-purpose hall in a short glance after coming out of the lift lobby. This results in few members of the public that were observed and recorded on the second level of the new CC building.

### **6.3 Agent- Release Simulation**

The agent release simulation is a simulation merged with space syntax and essentially simulates how people would orientate themselves through spaces in the neighbourhood, or the buildings (Penn and Turner, 2001; van der Hoeven and van Nes, 2014). In other words, the simulation bases people's movements based on the visibility graph (Turner, 2004). As this simulation is usually found to reflect pedestrian's movement in real life, this makes it a useful analysis to carry out and predict the social patterns and people's navigations in space (Turner, 2004; van der Hoeven and van Nes, 2014; Penn and Turner, 2001). Similar to VGA and axial analysis, the red areas indicate the highest number and the blue areas indicate the lowest number. In this case, the number refers to the number of agents.

As the agent-release simulation is based on the VGA, the patterns generated from the agent-release simulation is slightly similar to the VGA. From Figure 6.10, the areas with the lightest blues is the start of Seng Poh Road (in the direction of Tiong Bahru Market), and also the pathway leading to and from the 3-G facility. Through the lighter blue areas, it is evident there are some routes that is simulated to have more people than others. The lighter blue areas are found in the main roads, Seng Poh Road, Tiong Poh Road- the road at the back entrance of the community center. It is also found pathways surrounding the market, as well as pathways that line the post-war apartment blocks (represented in Figure 6.10 as individual rectangular polygons). The 3-G facilities and bus stops 10149 and 10141 are also public neighbourhood spaces that were simulated to have a fair amount of agents as compared to other spaces in the neighbourhood. The simulation predicted Seng Poh garden and the CC to have the least number of people.

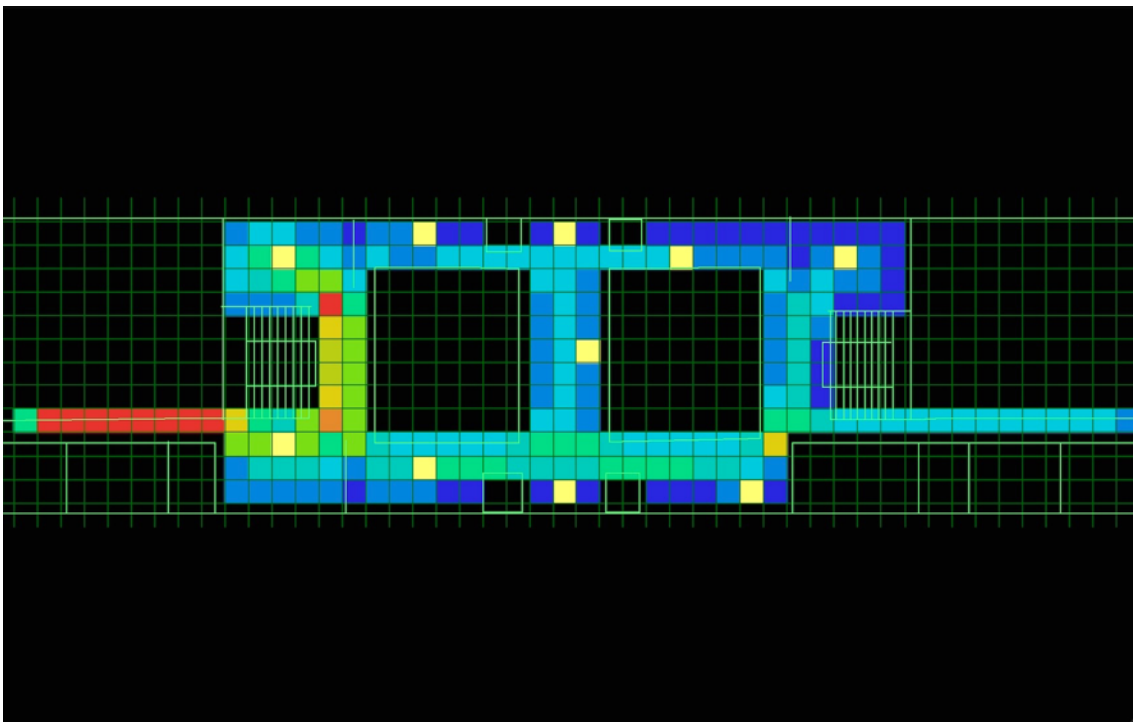


**FIGURE 6.10: AGENT-RELEASE SIMULATION OF TIONG BAHRU NEIGHBOURHOOD.**

In comparison to the data collected, Seng Poh garden and the CC were one of the more crowded public spaces that were frequented by the residents, even when counting in the number of pedestrians that walk through. An explanation for this discrepancy is most likely due to the fact that most of the pedestrians passing through the CC were seeking shelter from

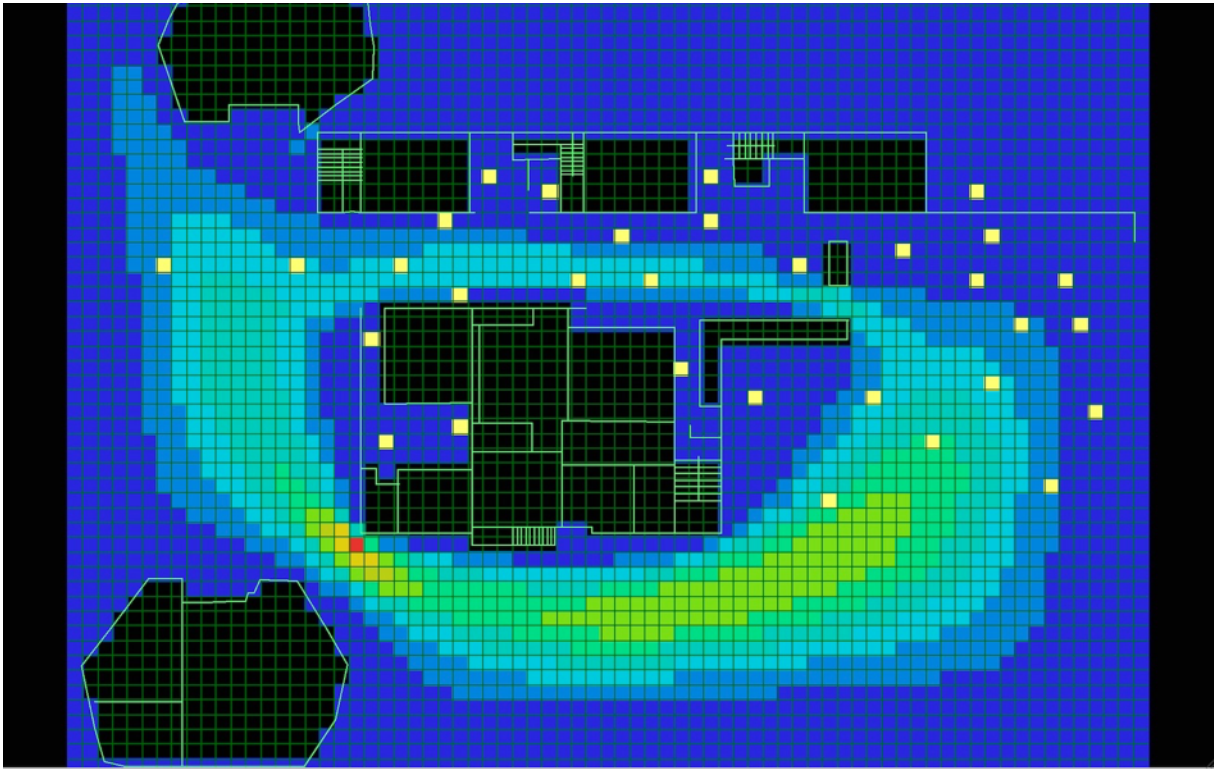


the warm weather or rain, while the pedestrians that were recorded walking through Seng Poh garden were observed exercising such as running, or taking a leisurely morning stroll, walking their dogs, or exploring the neighbourhood. Pedestrians commuting with a destination in mind i.e. going to work, school, or a specific shop in the neighbourhood, are usually observed walking on the pathways, community gardens that line the main roads (Seng Poh Road and Tiong Poh Road), post-war flats, the market as well as walking through the space where the 3-G facilities are located. This most likely explains the discrepancies when comparing the simulation and the data collected.



**FIGURE 6.11: AGENT-RELEASE SIMULATION OF OLD CC BUILDING LEVEL 1.**

Looking at Figure 6.11, the agent-release simulation differs slightly from VGA and the axial analysis. Most numbers of agents were only found on the left side of the CC, near the rooms. The rest of the old CC buildings have approximately similar amounts of agents. This however greatly differs from the actual data that was collected, for the same reasons as explained in section 6.1.



**FIGURE 6.12: AGENT-RELEASE SIMULATION OF NEW CC BUILDING LEVEL 1.**

The VGA and agent release simulation produced similar results to the Tiong Bahru analysis. The open area surrounding the CC building is simulated to have the most number of agents as it is the lightest. However the rest of the area in and surrounding the built area are dark blue, meaning that it is less likely to be explored by pedestrians or commuters. However, as explained in section 6.1, the single rectangle ledge is one of the most crowded spots for the CC's visitors because it is a good area for resting. This is similar with the CC's office, where there are quite a few people recorded in the office, but these people mainly had a purpose when they walk into the office, either they work there, or they needed to ask the staff for assistance. Part of the open entrance area and the basketball court that are predicted to have the least number of pedestrians also differs from the static snapshot data. From the data, there are quite a number of people observed and recorded in these locations. The reason for the difference is most likely due to the fact that the open space is not recognised as a space for an activity that brings the residents together in the software, and the open area in the entrance is linked to the middle corridor of the old CC building, hence the number of pedestrians passing by would increase. As that area is next to the basketball court, many would stand next to the basketball court as a spectator.



**FIGURE 6.13: AGENT-RELEASE SIMULATION OF NEW CC BUILDING LEVEL 2**

As with the axial analysis, the lift lobby is reflected to have the least number of agents. The area in the corridor with the most number of agents (red and orange) is the area that is in the middle of the corridor. Further towards the end of the corridor, the number of agents decreases. While this phenomenon where the number of agents decreases towards the end of the corridor generally reflects the data, on the static snapshot data, the people recorded were heading in the direction where it is linked towards the old CC building. Another predicted difference is that the lift lobby is reflected to have the least number of agents in the agent simulation. However it is crucial to note that the lift lobby and the staircase that is next to the lift lobby is the main way that the public will be able to access the second level from the first level, or vice versa.

## 6.4 Conclusion

From the different types of analysis done- VGA, axial analysis, and agent simulation- the axial analysis which measures the longest line of visibility seems to have the most impact on how space is being used by the residents in and visitors of Tiong Bahru. It is also evident that both orientability and visibility of space do influence the way that people navigate through



space. Open spaces with high visibility and orientability are predicted to attract the most people. This is evident from how the three analyses of the Tiong Bahru neighbourhood pinpoints the Tiong Bahru Market and bus shelters 10149 and 10141 as areas that would be the crowding point. Although the market was closed for renovations during the period of observation, literature and the qualitative data proved that it is indeed a site where social interactions between strangers and generations happen. The recorded data in the bus shelters showed that intergenerational interactions only happened between people who already knew each other- families, domestic workers and their employers, or friends. Furthermore from the discrepancies between the analyses and recorded data- such as considering the CC buildings as having the least visibility and orientability, it is evident that space syntax considers the unconscious and instinctive social practices (Hillier et al., 1976; Hillier and Hanson, 1984), but not consider human agency. This is because it is not able to tell the difference between commuting through space, taking leisurely walks, sitting or joining in activities. It is also not able to tell why people would choose one route over another in the neighbourhood, such as choosing a sheltered route over one that has high visibility or easier to orientate during a heavy shower, or warm weather. Human agency as a reason for these discrepancies is also reflected in how the space syntax analysis was more accurate in indoor spaces as opposed to outdoor spaces. In the public sheltered spaces, most people were wandering within the space and exploring the space, since they are usually already in their destination. This is in comparison to open public spaces where most recorded usually have a specific destination in mind, or had a purpose to be in that space.

From this chapter, it can thus be concluded that to increase social interactions in between residents, it helps to have a highly visible and orientable space in the neighbourhood as it increases the number of people passing by and thus increases awareness of the space. This will also increase the chance of interactions between residents in the space. However to in order to actively establish interactions, especially interactions that are intergenerational, dependency on the design of space is not enough. The introduction of events and activities is also needed in order to intentionally establish communal bonds in the neighbourhood.

## **7 Ageing in Place in Tiong Bahru**

As proven through the literature in geographies of ageing in Chapter 2, ageing in place for the elderly will be especially successful when the elderly population is familiar with the neighbourhood space (Wiles et al., 2011; Buffel and Phillipson, 2015) and has established a good relationship with the neighbourhood community (Buffel and Phillipson, 2015; Sixsmith and Sixsmith, 2008; Wiles et al., 2011). In order to determine a good ageing in place experience for the elderly, this chapter will present the observation and interview data into three themes, which are - 1) Liveability in Tiong Bahru; 2) Relationships in Tiong Bahru; and 3) Community Spirit.

### **7.1 Liveability in Tiong Bahru**

“The children have really good behaviours. If you were to go to other estates, like my previous estate in Toa Payoh, it’s messy. Unlike here, it’s really good here. ... Anyway, the environment here is really good.” (Eddy, Interview, 24 March 2017)

“Yes. The air is good. This area is good.” (Sally, Interview, 24 March 2017)

During the interviews, it was evident that the most of the elderly were generally happy with the living environment in Tiong Bahru. Besides that, the other words that were used to describe the neighbourhood in the interviews were ‘private’, ‘quiet’, ‘easy access to the city’ as well as ‘having a nice ambience’ due to its conserved status as a neighbourhood. Despite that, one of the main shortcomings that impede liveability for the elderly population in Tiong Bahru was the fact that lifts were not installed in this estate due to the conservation guidelines of the Tiong Bahru estate. This problem still persists even after handles and steps have been installed (Figure 7.1) to aid in the increasingly aging demographic in walking and negotiating through the space of the neighbourhood.



**FIGURE 7.1 NEWLY INSTALLED WALKING AIDS FOR THE ELDERLY IN CONSERVED HOMES.**

As seen from the following quotes, the lack of lifts was one of the main hindrances for the elderly population to age in place. Wong and Verbugge's (2009) research also shows that difficulties in negotiating inaccessible, or hard-to-access environments due to too many steps or the lack of lifts have challenged the elderly from venturing beyond their home space, or neighbourhoods, restricting them from establishing a better relationships with their social network. Furthermore, the fact that lifts were not able be installed had even inconvenienced younger families or residents who recently moved into the neighbourhood. Thus, residents in Tiong Bahru faced several difficulties and inconveniences in running their errands or simply just trying to negotiate through their neighbourhood space daily due to the lack of lifts. These difficulties were especially amplified if one had difficulties walking, or was physically disabled.

“...fact that there is no lift. So you will see that that quickly eradicates a certain age group- 70s to 80s. Owners of that age will think of selling. It is very hard to negotiate those, you know, 75 to 85 steps if you are living top floor. ...” (Mariah, Interview, 22 December 2016)

“... that friend had difficulty moving in and had to get a specific brand of refrigerator where they still provide manual moving services.” (Observation, 4 December 2016)

“There is a lady who asked someone in the RC to get food for her because she has difficulty in walking ... It is all right to do it a few times, I don’t think anyone minds doing that. But not for every meal.” (Mary, Interview, 23 March 2017)

The lack of lifts and difficulties to be independent in daily activities had even caused some of the elderly to shift out of the neighbourhood to another neighbourhood, or other living conditions, that would be able to accommodate to their needs.

“I have got two friends recently in their 70s, staying in their fourth, and third stories. It is too hard to climb now and the families have decided to sell...” (Mariah, Interview, 22 December 2016)

It is however imperative to take note that decisions to move out of the neighbourhood, or to stay within the neighbourhood is based on the individual’s life course. In other words, each individual’s decisions are shaped by their life experiences and developments (Hunt, 2005; Hooyman and Kiyak, 2014), which are based on time, place, linked social lives, human agency, and their adaptation to external events and resources (Hunt, 2005). This was evident from the number of the elderly population such as Eddy, Sally and Mary’s brother who choose to continue ageing in place in Tiong Bahru.

“I have told my brother to move out a few times, but he wanted to stay on and keep the place for sentimental reasons.” (Mary, Interview, 23 March 2017)

## **7.2 Relationships within Tiong Bahru**

One of the main factors of ageing in place is the relationships that were established within the neighbourhood (Wiles et al., 2011; Buffel and Phillipson, 2015). These relationships referred in this section pertain to relationships established with family, friends and neighbours that

exist or are established within the Tiong Bahru neighbourhood. During the interviews, one of the main relationships that most interviewees talk about when discussing their daily routines in the neighbourhood was one that involved their family. Being close to their immediate family members was also one of the main reasons why the interviewed elderly population choose to move into and continue living in the neighbourhood.

“... I go to my brother’s house. He lives in the pre-war flat. I moved back into the neighbourhood, and bought the post-war flat. So I live a walking distance from my brother. I will eat dinner with my brother before going home. ...” (Mary, Interview, 23 March 2017)

“... with my son, I walk around with him. I walk with my family members...” (Sally, Interview, 24 March 2017)

“Interviewer: ... the reason of coming to the Tiong Bahru area is because...?”

Eddy: It’s because my daughter used to live in Toa Payoh. When she saw this house, she bought it.” (Eddy, Interview, 24 March 2017)

Besides the family being a social support for the elderly, it is also important to acknowledge the contributing role that the elderly play in their family. Using Eddy as an example, he continues to help in household chores for his and his daughter’s home. Eddy was also observed during a few morning observation sessions walking to, or from his daughter’s home, usually carrying a bag of food that he has bought for her.

“I help them move their stuff around so they do not have to buy their own.” (Eddy, Interview, 24 March 2017)

Based on Wu and Chan’s (2012) research, the strongest variables for elderly isolation is living alone, and subsequently, elderly who are living with their adult children. This is contrasted with the ‘friendship’ variable being one of the strongest predictors to reduce social isolation for the Singaporean elderly. One of the ways that friendship is established between neighbours is through spaces of interaction such as public walkways and roads, where neighbours eventually become familiar with each other.

“I smile at my neighbours when I walk past them usually. After a period of smiling and interacting briefly with your neighbours, you would eventually get to know them.” (Lana, Interview, 24 March 2017)

“... an old man who frequently take morning walks with his brown dog... I walked past him as I did almost every morning, he did not seem as curious as he was on the other day(s), and even seemed to give me a look of acknowledgement...” (Observation, 29 March 2017)

Another way that the neighbours get to know each other is through joining the RC, or simply participating in the activities and events that were organised by the resident’s committee (RC), the community center (CC) and/ or the *taichi* sessions that were held in Seng Poh Gardens almost every morning. From the observation sessions, most of the elderly would usually end up chatting with each other in their own cliques, or head off together to a nearby coffee shop for breakfast after their *taichi* sessions.

“I am friendly with the residents, especially those who are in the RC. During the weekends, we would frequent the *kopitiam* with the fellow residents.” (Mary, Interview, 23 March 2017)

Friendships were also forged outside of the neighbourhood, such as how Eddy realised that his physiotherapy nurse was also his neighbour after he had recovered. By having friends in the neighbourhood, it also introduces the individual to other friends within the neighbourhood community. Expanding their network of friends also exposes and encourages the elderly to participate in other activities, both within and outside of the neighbourhood. The main example was Eddy’s presence in Coffee Corner, where he attended an RC event for the first time because his friend told him about the Coffee Corner.

“Also, because I am part of the RC, so I get the added advantage of inviting neighbours out to all these events, and also meeting new neighbours in these events like today’s coffee corner is new, and then I also attend the Rammy O-mahjong” (Lana, Interview, 24 March 2017)

“... there was one lady who was initially fearful of her neighbours, but after she voiced out and started mixing with the RC members, she became so much happier and more chatty as well.” (Mary, Interview, 23 March 2017)

“... I am talking about the more 70s age group. It really depends on our neighbours to pull them out like, “There is this activity, it would be nice if you go.”” (Mariah, Interview, 22 December 2016)

From the relationships, such as kinship and friendship, that exists in the neighbourhood, it was evident that the elderly in Tiong Bahru can both benefit- by gaining activities and social company- and contribute to their relationships, by helping their families in household chores and helping other elderly neighbours expand their networks and activities.

### **7.3 Community Spirit: Participation and Contribution within the Neighbourhood**

“I gave my full commitment to the resident’s committee here so I don’t really feel lonely even though I am living alone.” (Lana, Interview, 24 March 2017)

Besides forging relationships between family and neighbours, Wu and Chan (2012) show there is the highest likelihood of decreasing old age by contributing and participating in neighbourhood events and the community. By contributing and forging friendships with neighbours, it thus enables a better ageing in place experience for the elderly in the community (Sixsmith and Sixsmith, 2008; Wiles et al., 2011). The network of kinships and friendships that were forged among residents living in the neighbourhood eventually combined and deepened to become a community- where the neighbours not only socialised, but also united, looked out for and took care of each other. This included advising and exchanging of information for repairs, and good deals such as Eddy recommending me better and cheaper coffeeshops around the neighbourhood when I bumped into him during my morning observation on 29 March 2017.

“... they will still exchange things like “Oh, your tap is leaking, maybe you want to call this plumber, like quite good. Like electrician those stuff, like quite good.”” (Mariah, Interview, 22 December 2016)

It is evident from the data that most of the community connections were mainly established through the RC, which was part of the Grassroots Organisation’s initiative that formed in every neighbourhood in Singapore to ensure a cohesive bond and a deepened trust between and among residents in a neighbourhood (Osman, 2015). The RC organised events and activities for the residents. These events were usually publicised through handouts that were pasted in every block, and every notice boards in the neighbourhood. Information about future events were also publicised during an event in order to keep the residents updated. These events not only brought the elderly residents together, but it also gave them an opportunity to contribute back to their communities by bringing food that they had bought or cooked; teaching and helping other residents learn craftwork and skills such as learning palm therapy during coffee corner event (Figure 7.2); or setting up and clearing the space for the event.

“A pulled out her phone and showed me pictures of the RC members traveling together to a *kelong* (house above the water, usually for fishermen) in Malaysia.” (Observation, 28 March 2017)

“so far, I am heartened to say that it feels like an actual gathering considering people have even contributed food to these events. And what is most touching is that some residents would bring food weekly.” (Mary, Interview, 23 March 2017)





**FIGURE 7.2 SAMPLE PAGES FROM THE PALM THERAPY HANDOUT DURING THE COFFEE CORNER, PREPARED BY A PARTICIPANT WHO IS A TIONG BAHRU RESIDENT.**

Such interactions eventually deepened the relationships and enabled the residents to feel comfortable socialising, to seek help from, and also to help their neighbours. The sense of belonging established within the neighbourhood community was so strong that some previous residents would even travel back to help out for the weekly karaoke event organised by the RC, like the old man who manned the karaoke machine would travel from Kembangan to Tiong Bahru every Tuesday night. When interviewed, those who had contributed and participated often in the RC events also stated that they felt a strong sense of belonging to the neighbourhood. One of the reasons that they may feel more connected to the neighbourhood community when they had contributed and participated was because they had learnt to put aside their differences and conflicts to work together, or interacted with one another for a successful and harmonious event. Besides just organising events for the residents, the RC also ensures the wellbeing of their socially isolated residents by dropping by to chat and check on their wellbeing.

“C can be a nasty character and unpleasant man... and has a reputation but the RC needs to have someone to man... A said because of that, A has learnt to put A’s differences aside and to accept C for who C is, and try to get the community to work with C” (Observation, 28 March 2017)

“... there is this man who is staying by himself, and we as a RC make it a point to occasionally check on this old man.” (Mary, Interview, 23 March 2017)

Despite that, it is crucial to note that RC events were not the only way community connections were established. Community connections can also be established and maintained organically, without any interventions, in public spaces. One example to show the community looking out for each other was the sharing of public seats in the community center when there were not enough seats in order to ensure that everyone was comfortable. This enabled residents to start conversations with each other. Another example of public spaces helping residents to maintain their community connections is the example of the market, which served as a functional space where residents would run their errands, or purchase food for themselves. This made it an easy and accessible gathering point to socialise in and keep in contact with other neighbours. The interview with Lana also shows an example of community spirit forged in public spaces, when Lana described that she first got to know her neighbours by walking past them on the public walkways, and how this eventually led to a strong enough bond to render her help to her neighbours with their care-taking duties.

“... she was trying to make space for me and her domestic helper to sit. I thanked her for that gesture, and she said “你坐啊,应该公私 的,又不是我的”(Do sit, its not mine and meant for sharing any way).” (Observation, 23 March 2017)

“Because of this market. When you come and chat here everyday, and when you start not seeing a person for one week, two weeks, and you know this person does not have extended family over, straightaway, you can sense already.” (Mariah, Interview, 22 December 2016)

“Also, as I was saying the reason that I came late just now, I actually know the daughter and son before I know the mother and started to help take care of the mother.” (Lana, Interview, 24 March 2017)

Quasi-public spaces, like coffee shops and minimarts, also provided a space where most residents would frequent, interact with each other as well as store owners. The two fruit stalls (mentioned in Chapter 5) who were observed setting up their stalls in public walkways also served as an informal gathering point by providing chairs and seats for the elderly residents to sit down and chat among themselves, or with the fruit stall owner. Furthermore, stall owners also played a part in fostering the community spirit in the neighbourhood by giving special discounts and benefits to frequent customers, who were mostly residents, or they would volunteer to contribute or donate items for events.

“Also, when I go shopping around the neighbourhood, sometimes I would buy something and get a discount. And sometimes when the shopkeepers find out that things are for a RC event, they will give it to us for free. But of course, we would decline their offer because it is not fair for them. And not just because I am in the RC, I have other friends who go to certain shops often, and the stall holder would give them more ingredients.” (Mary, Interview, 23 March 2017)

“... ask the stallholders to donate tetrapacks. So if 3 holders donate 10 cartons, that is 30 cartons, each carton is 6, so we have roughly about 100 over cartons, yeah 100 over tetrapacks, so we can have 60, or 80 over people who attend the function without worrying about drinks.” (Mariah, Interview, 22 December 2016)

Having a tight knitted community enables the community to be able to clearly voice out their needs and wants during participatory planning when redeveloping the estate. When the market was being completely rebuilt in 2004 (Bravo, 2015), Mariah stated during the interview that the residents participated in the planning process and gave opinions as to how they wanted the layout of their market to be, the types of shops needed in the market and that a carpark was necessary to attract visitors to the neighbourhood. By having a united opinion that meets the diverse needs of the residents and hence influence the building of public space, it enables the community to be able to enjoy and better negotiate their environment.

## **7.4 Conclusion**

This chapter covers Tiong Bahru's livability, the relationships and the community spirit that exists in the neighbourhood as main factors that enable the elderly residents to age in place. Although it is generally a tight knit community due to the deepened friendships that have been established among the neighbours and families, the ability to participate and contribute may only apply to those who are able-bodied. These events may hence unintentionally exclude the disabled, or those who have difficulties negotiating up and down the steps to and from their homes to the event/ activity venue-s, public, or quasi-public spaces due to inability to build lifts. While the resident's committee does try to accommodate and check on the wellbeing of the residents, kinship should also be acknowledged as an important factor to maintain the social and physical well being of a disabled elderly. Although family is not considered as an important variable for a good social life in Wu and Chan's (2012) research, Eddy's example proves that staying with the family in the same neighbourhood creates another outlet for the elderly to contribute to, and hence enabling them to feel a continuity in their life course. With a tight-knit community, the unity in opinion(s) on what the community needs and wants in the public neighbourhood spaces will hopefully enable for a smooth and clear communication with urban planning authorities, in future cases of redevelopment projects. As Wu and Chan's (2012) research also shows that building public neighbourhood spaces enables more social participation and community bonding in the neighbourhood, this in turn enables a better ageing in place experience for the elderly. The next chapter thus intends to explore the idea of intergenerational public spaces for the elderly.

## **8 Intergenerational Spaces**

As pointed out in Chapter 2, multigenerational public spaces are beneficial because it will be able to meet the diverse needs of all ages, especially the young and elderly demographic, in the neighbourhood, thus enhancing livability (Melville and Hatton-Yeo, 2015). However, in order for an enriched learning experience for all generations and also more outlets for the elderly to contribute to their community (Power et al., 2007), intergenerational spaces i.e. spaces that facilitate interactions between generations, would then enable for a more active and tighter community (Kaplan and Haider, 2015). This chapter will first point out the multigenerational spaces in Tiong Bahru, and subsequently pinpoint the spaces which

facilitate intergenerational interactions. Lastly, this chapter also acknowledges that the intergenerational interactions in public spaces also lead to contestations, clashes and tensions between generations within public neighbourhood spaces.

## 8.1 Multigenerational Encounters and Spaces

From observation, most of the spaces identified as public neighbourhood spaces in Tiong Bahru were multigenerational, which means that public space is designed to be inclusive for all generations. Spaces such as roads, and walkways were obvious areas used by the general public. It has also been observed that different generations co-exist in those spaces together.

“As I continued to walk on my route, I saw that there were groups of elderly woman who were walking while talking and laughing loudly. ... It seemed like these elderly ladies could have just finished their *taichi/ qigong* class and were on their way to eat their breakfast. While walking around, there were many mothers around the area who were pushing their babies’ prams while chatting with each other as well.” (Observation, 30 March 2017)

However based on the number of people observed during the static snapshot walk, some public spaces were more popular and frequented often by a diverse range of generations. These public neighbourhood spaces include bus shelters; a 3-Generation (3G) facility that comprise of a playground and fitness corner catering to the different needs of both elderly and adults (Thang, 2015) (in Figure 4.5); and the first level of the community centers (in Figures 4.11 and 4.12).

During the observation, it was clear that different generations would be more active in the space at certain times. One prominent example was through observing people at the three bus shelters in the mornings. Slightly before 7 a.m. on a weekday, most people who were frequenting the bus shelters were school children, who were on their way to school. They were occasionally accompanied by an adult or an elderly, whom was presumed to be their grandparent or caretaker. After 7 a.m. on a weekday, mostly working adults would be observed at the bus shelter as they were on their way to work. Around 7 a.m. weekends, the bus shelter would usually be occupied mainly by elderly people, who were occasionally

accompanied by their adult children or domestic worker. Another example would include the use of the 3-G facility where the elderly would exercise at the exercise stations on a weekday morning, while the children and their families seemed to only make use of the facility on a weekend afternoon or evening. This pattern of usage was also reflected in the nearby Seng Poh Garden's amphitheatre, where *taichi* sessions at 7 a.m. were held almost everyday, except on a Sunday. There are usually at least ten to fifteen elderly who attended these sessions every morning. As written in Chapter 7, this was usually in parallel co-existence with a few adults, who were most likely working in Tiong Bahru, sitting at benches in the park. The younger residents in Tiong Bahru, such as adults, or children, usually only used the space during evenings, especially during the weekends to jog, or take a walk with their families. During the afternoons, these spaces were generally quiet, where only workers from nearby construction sites, or tired passersby would use the spaces, especially if they were sheltered. The different timings that were used by different generations in the same space was so jarring that a slight deviation i.e. my presence, resulted in a 90 plus year old man who came up to me and asked why I was in the garden at such an early time during my observation on 25 March 2017.

## 8.2 Intergenerational Interactions and Spaces

Similar to Thang's (2015) paper on 3G-facilities in Singapore's public housing neighbourhood, most of intergenerational interactions observed occurred within confined parameters, such as familial interactions, domestic workers or if the younger children were playing with each other while their parents/ caretakers were talking. The friendship between parents/ caretakers usually then means that there will inevitably be interactions within the generations that are not within the family, but due to familiarity between the residents. These interactions were observed mainly on liminal spaces such as public walkways, rather than other public neighbourhood spaces identified in this research.

“... with my son, I walk around with him. I walk with my family members, and I also walk around with my domestic helper.” (Sally, Interview, 24 March 2017)

“Like for example if a senior comes along, they would not usually go alone but would go with their maid or their family members.” (Mary, Interview, 21 February 2017)

“... many mothers with their younger children who were chatting with each other. Their younger children were also playing with each other.” (Observation, 30 March 2017)

Other kinds of intergenerational interactions that were observed, through my position as a young adult researcher, was the fact that the elderly population would offer their advice, life lessons or concerns, to the younger generation- whether they were familiar with the members of the younger generation or not. This was evident through the interactions that I had with an elderly in the public neighbourhood spaces during my observation, where she told me not to be out in the sun because it was damaging to the skin, or how Eddy would give me advice for surviving in this world, or advise me where the better and cheaper food places were in the neighbourhood when bumping into him in bus shelters or public walkways.

“I took a seat and an elderly lady lifted her bags and told me to move nearer to her so that the “太阳不会晒到你的皮皮肤” (The sun will not scorch your skin).” (Observation, 23 March 2017)

“When he heard where I was going for breakfast, he said that it was expensive and not really nice, and subsequently gave me ‘advice’ on where the good and cheap food was located- Chinatown, and the vegetarian store in another coffee shop located in Tiong Bahru.” (Observation, 29 March 2017)

“...he told me that he always tells his daughter to not trust strangers, and just take everything others have said with a pinch of salt. He said he would advise me to take that advice, and not believe everything that he says as well.” (Observation, 24 March 2017)

A more explicit example of the older generations imparting advice and life values to the younger generations is Lana. Not only did she remind me of the importance of being filial towards my parents during the interview, the fact that she rendered help to her younger neighbour with their care-taking duties for their mother shows Lana’s willingness to actively

carry out what she values. Through this example, it shows that intergenerational interactions and relationships do open up new possibilities of contribution towards the community.

“... I just came from helping my neighbour to take care of her mother. I bumped into my younger neighbour while walking here. I asked her how is her mother doing, and she replied that her mother was not doing very well. ... Anyway, since I felt that she is rather isolated due to the death of her husband, you know, she does not even change her clothes, I have offered her children that they can come to me if they need any help taking care of their mother.” (Lana, Interview, 24 March 2017)

Through participation in events, help and health advice would also be offered from the older generation to the younger generation. During the coffee corner sessions, help was rendered in a form of trying to make sure I caught up with what everyone was saying by repeating what was said, or translating it to English. Simon’s wife also gave advice and displayed concern for me by urging me to go to the toilet after the karaoke session because the need may arise on my long journey home from the session. As I rejected the need, she then commented that

“it was only the young who could do such things i.e. not urinate as much as the elderly” (Observation, 28 March 2017).

Even through such short interactions, it is evident that not only do intergenerational interactions provide an opportunity for contribution, but it also enables the younger generations to learn more about the ageing process through discussing bodily changes.

While most of the intergenerational interactions described above in this paper occurs in public liminal spaces such as pedestrian pathways or bus shelters, a space that was observed to encourage and promote intergenerational interactions was the open basketball court located within the boundaries of the community center. Although Figure 4.12 shows that most of the interactions were within the own generations, the observations made throughout the week proves the space to be one that enables members of different generations, and even nationalities, to bond over a game of basketball. Unlike other spaces, where residents who did not know each other did not talk, residents were eventually talking to each other during and



after a game of basketball. At the start of my observation sessions, the youths who were using the basketball court played on their own side of the court and only passed the ball among their own groups of friends whom they came with initially. However, interactions were developed between the different groups when older, more experienced basketball players would give tips to the younger basketball players, or when the ball ends up on another group's territory. These interactions sometimes develop further into passionate conversations revolving around the game, or basketball. During observation sessions, there was an elderly Indian man teaching the younger players some basketball techniques, it was observed that he would also have friendly competitions with the other players who are present. This resulted in a rather intense match one evening that involved several youths, three adult expatriates and the elderly man. As the particular session was competitive and intense, it has also attracted a few onlookers who stood by the sidelines to watch the match. Although the usual sessions were not as intense, onlookers were still interested to watch others play. While the onlookers were usually grown males who looked like they understood the game, children were also spotted to be engrossed in watching the youths play and then imitating the act of dribbling a basketball to their parents. As sports have often functioned as place attachment and segmental bonding for some units such as schools or municipalities (Bale, 2003), it is evident sports can also aid with functional, day-to-day bonding between generations in a neighbourhood.

Besides the basketball court, the biannual flea market organised by the Resident's Committee had also brought the different generations of residents together in the same space, notably the public walkway right next to the Tiong Bahru Market. Due to its popularity, the community has to share in order to be able to participate, resulting in further interactions between the neighbours. Furthermore, having a flea market not only encourages intergenerational interactions within the community, but also curious visitors from outside the neighbourhood community.

“... it is \$20 to rent 2 tables and 2 chair. That is really cheap. You just have to pay two months in advance. There has been foreigners who have applied to sell for the flea market. But because our flea market has been so popular, we usually have enough store vendors, this resulted in people who are sharing tables side by side.” (Mary, Interview, 21 February 2017)

### 8.3 Generational Contestations in Public Space

As written in Chapter 2, Pain (2005) points out that conflicts in public space is inevitable among the diverse generations that exists within. During interviews and observation, it was clear that there were tensions in between the elderly residents, and the other generations. However, the tensions that existed between generations were mainly cultural tensions between locals and foreigners. While some causes of tensions were about inconsiderate neighbours bringing down the neighbourhood's image, there was also unhappiness over how the public space was used. One of the main sources of unhappiness that the local elderly residents had complained to Mary were mainly how public spaces were "misused", dirtied and damaged by foreigners, usually from the younger generations. These caused inconveniences to the residents for example disturbing them from their sleep, and making the neighbourhood's environment unpleasant.

"They were having a party in the middle of the night. As if that is not enough, they were smoking and vomited all over the hallway. They were AirBnB guests. We should not have any of these AirBnB nonsense around! So anyway, someone reported to the police. The police came and then the party stopped. But after the police left, the party went on again at 3 a.m." (Mary, Interview, 23 March 2017)

"There are so many damaged benches everywhere because of all those foreigners who are sleeping on the benches. I suggested putting hand rests on these benches in order to prevent people who want to sleep on these benches. There are also people who have parties in these gardens." (Mary, Interview, 21 February 2017)

Other inconveniences that were caused by generational disagreement were the temporary play sets that were set up for children on days with good weather. However, that resulting noise that was produced seemed to be a disturbance to the residents living nearby, who "will complain to the RC, and tell us things like "Get it out of my area, can't you put it somewhere else, like next door?" (Mary, Interview, 23 March 2017).

Not only does conflict arise from disturbances and inconveniences, conflicts also arise from the different perceptions and imagination of what space is, and how public space should be used in Tiong Bahru. One of the main public spaces that was contested between different generations were public pathways and roads. During the observation session on 30 March 2017, a fight almost broke out in the public space of Tiong Bahru when an adult expatriate cyclist displayed impatience towards pedestrians. The pedestrians were mainly some local elderly men and some mothers with babies, who were walking at their own pace, or standing around to chat on a public walkway near one of the coffee shops. This incurred the wrath of the elderly local man who started glaring and making gestures at the cyclist, while the cyclist glared back. There was also another incident observed on 26 March 2017, where a foreign cyclist got down his bike to shout at a local driver right outside the community center. Perceptions on how public space should and can be used also extends to tourists. The act of photography by tourists however may impinge into the privacy of the residents, who may be uncomfortable to have pictures of their homes, or faces taken by the tourists. This was observed on 25 March 2017 when an elderly man with walking stick shielded his face with his arm when he spotted a few tourists trying to take a photo of one of the conserved buildings.

Also similar to what Pain (2005) has presented in her findings- the elderly demographic is more involved in community events and activities in comparison to the younger demographic, resulting in an 'intergenerational gulf'. When observations were done in the two events- Coffee Corner (24 March 2017) and Karaoke Night (28 March 2017)- I was the only young adult there, and most were shocked, curious or surprised by my attendance. This amazement that a younger person joined then resulted in slight generational tensions because generational gaps and knowledge becomes more apparent. The discussion about my reflexivity (Chapter 3) as being stereotyped as a typical member of the younger generation was evident of the generational gap between the elderly population and I. Most elderly were confused about what language I was able to understand and speak- there were discussions and debates whether the younger generations were actually bilingual and able to speak both English and Mandarin. Based on stereotypes of the younger generations, there was even a certainty that I was not able to understand any dialects such as Cantonese or Hokkien just because I was part of the younger generation, despite trying to convince them that I was able to understand. This resulted in using dialects to chat about me, or shocked looks when I laughed at their jokes.

The generational gap was also reflected through the selection of songs where I did not know a single artist or song that was sung during that karaoke night, and the songs that I knew were claimed to be “not their generation” for them even though I considered them as oldies, or classics. This generational gap resulted in me being unable to sing any of the songs selected for me properly, causing potential clashes.

“As it was a fairly famous tune, C turned around from C’s seat and grumbled under C’s breath that I was singing the song wrongly. When the song was about to end, C further grumbled, something along the lines that not only do I not know how to speak in Cantonese or Mandarin, but I also mess up the song.” (Observation, 28 March 2017)

Generational gaps and conflicts over the use of multigenerational and intergenerational public spaces may potentially lead to neighbourhood inequalities, and exclusion of certain generational groups. It may also become a barrier that prevents people in the community from participating (Pain, 2005). The intergenerational conflicts may also lead to negative stereotypes about each generation(s) being reproduced (Pain, 2001).

## **8.4 Conclusion**

Overall, this chapter shows that most strangers from different generations would rather not talk to each other in a public spaces, meaning that public neighbourhood spaces are mainly multigenerational and limiting intergenerational interactions in public spaces to be mainly between family, employer - domestic worker relationship, friends or familiar neighbours. However, through observations and interviews, intergenerational interactions in public neighbourhood spaces, mainly from the older to the younger generation, can happen through contributing to the neighbourhood community in everyday life such as offering life and health advice, sharing of values, and even helping with care taking duties. Observation also shows that sports, namely basketball, has helped to establish intergenerational relationships in public neighbourhood spaces. Such interactions with younger generations enable for a stronger community bond between neighbours, and create opportunities for an enriched learning experience between all generations. It is however inevitable that intergenerational contestations also occur in these spaces due to generational gap, or -in Tiong Bahru’s case

where most of the conflicts that exists are with the new expatriate residents- cultural gaps that lead to different perceptions as to how public space should be used. Ultimately, solutions should ideally be implemented in order to include all generations and nationalities that exist within the community in order to establish a more tight knit community.

“... so to integrate modern folks with us here ah, you have to engage them at a certain level, where they are comfortable to be out and likewise, you are” (Mariah, Interview, 22 December 2017)

## **9 Conclusion**

Overall, this thesis has explored concepts related to urban geography and the intergenerational framework by identifying where the spaces of interactions are located in the neighbourhood; understanding how urban public space design affects social interactions in the neighbourhood; the relationship(s) between different generations, and lastly, how sense of place can be generated and maintained for the elderly residents in a neighbourhood that is currently undergoing urban regeneration. In order to investigate the research aims, this thesis has made use of a range of methods- static snapshot, observation, observation as a participant and semi-structured interviews.

Questions such as how space is used by the different generations, and how frequently intergenerational interactions occur can be derived from the compiled static snapshot results. Not only did the static snapshot results showed that most spaces were multigenerational, each static snapshot record also reflected the changing social landscapes in the neighbourhood with time and weather. For example, the people who use public space in the morning will mostly be the elderly residents. The rain will mean that most would rather use the public spaces that have a shelter. Furthermore from the compiled static snapshot results, it was clear that the intergenerational interactions that were recorded in public space mainly occurred between people who were already familiar with each other, usually between families (Section 8.2). The static snapshot also showed how frequently spaces were used by residents. Thus by comparing the results collected from the static snapshot method with the three space syntax analyses (VGA, axial analysis and agent simulation) in Chapter 6, the research aim- how the design of urban public space affects social interactions in Tiong Bahru- was evaluated. As

Chapter 6 has discussed- an ideally designed public space that is sheltered, easy to walk to and designed with high visibility and orientability means that there are lesser opportunities for segregation between generations and thus enables more chances for residents to see each other in the public spaces and generate conversations from there. However, it can be concluded from the comparison of the static snapshots and space syntax analysis that in order to establish intergenerational relationships, there is a need for specific activities or events since factors such as high visibility, orientability and convenience in the built space are not enough to guarantee the establishment of intergenerational interactions.

As the static snapshot method did not fully capture the ever-changing nature of space, observation was also incorporated as part of the methods to reflect the changing landscape of the neighbourhood over the different times of the day and days of the week. The observation thus shows the fluidity of the public-private dichotomy through how individuals and shops take up public space at certain times of the day, or by marking their territories in public spaces. This follows the ontogenetic thought discussed in Section 2.2.1 that space is constantly re-territorialised by different individuals, and always in the process of changing. The fluidity of the public-private dichotomy is further discussed in Chapter 5- where spaces are considered 'public' or 'private', and dependent on elements such as human agency, time and weather. Thus besides the public spaces like the market, community center, and Seng Poh garden hypothesised in Section 2.4.4, the observation showed that there are more 'public' spaces in the neighbourhood that enabled residents to interact with one another such as the RC office, temporary fruit stalls, community gardens and coffee shops. Through the implementation of observations, the results also showed the public spaces in the neighbourhood that facilitated interactions and contestations between generations (discussed in Chapter 8). From Chapter 8, it was pointed out that group sports brought strangers from different generations together in the neighbourhood. Chapter 8 also observed that the contestations between the local Singaporean and foreigners, both expatriates and tourists, were due to different perceptions on how public space should be used. Not only were these results discussed in Chapter 8, but these results from observations also supplemented the reasons for the discrepancies between the compiled static snapshot and the space syntax analysis in Chapter 6.

From the coded interviews conducted in this research, it enabled a better understanding of the reasons that the elderly residents continue ‘ageing in place’ in the neighbourhood. This led to the discussion of liveability of Tiong Bahru in Chapter 7. The interviews showed that the elderly residents were generally happy with their living environments although some complained that the lack of lifts due to conservation policies was an issue that made it hard to negotiate through their environment. Despite that, it was evident through the interviews that the main factor contributing to the elderly’s decision to continue to ageing in place is the social relationships established within the community, such as family, friends, and neighbours. This research has also adopted the view that each elderly is different from the other, rather than looking at the older generation as a collective whole (Skinner et al., 2015). The analysis of content from the semi-structured interviews was hence also focused on the participations and contributions of the ageing residents to their families or neighbourhood in Chapter 7. This discussion enabled a better understanding of how age identities are resisted (Pain and Hopkins, 2010) by different individuals. From the interviews, it was also understood that specific activities and events, such as group sports and the bi-annual flea market have facilitated intergenerational bonds and understanding between the different generations, and even nationalities, in the neighbourhood, as discussed in Chapter 8.

Not only did conducting both observation and semi-structured interviews enabled a better understanding of the research participants, through the reflecting on my positionality during and after the data collection stage (Section 3.5), it enabled a further reflection on intergenerational interactions within the neighbourhood. Through the interactions, I was able to learn their values, perceptions, and how they were able to negotiate through space with an increasingly ageing body. Thus by stressing the importance of intergenerational relationships in this thesis, the elderly demographic can be seen as contributors to the home, neighbourhood and national scale.

Ultimately, this thesis has thus contributed to the broader literature of intergenerational gerontological studies by basing it on the ontogenetic thought of space as a theoretical framework. By comparing the space syntax analysis of the built space to the data collected, it enables for more objective and better feedback to plan for future public spaces (Karimi, 2012) that can encourage intergenerational interactions. From space syntax analysis and the qualitative data, this research also concludes that having regular events and activities in the

neighbourhood may be a key solution to resolve the contestations of space between generations and nationalities, and to aid the elderly in ageing in place. Lastly by focusing on the elderly's contribution to their neighbourhood (Pain, 2005; Kaplan and Haider, 2015), it will hopefully encourage age integration as opposed to age segregation and/or discrimination.

## **9.1 Reflections on the Use of Space Syntax for Intergenerational Space Planning**

Through the comparisons of the static snapshot data and the results from space syntax analysis, it was concluded that space syntax analysis is limited because it does not take into account human agency, or events and activities that are happening within time-space. This section thus intends to further reflect upon the use of space syntax analysis for intergenerational public space planning, and suggest changes for future use.

Although space syntax has its own limitations, these limitations of the analyses in this research were different from the limitations pointed out by Ratti (2004) who states that axial lines do not represent the space accurately. The limitations in the space syntax analysis from this research aligns itself with the main criticism of space syntax, which is the fact that space syntax does not take into account the human psychology, but rather points out the social ordering of the environment (Hillier, 1999). This would thus work if assuming the pedestrians have no agency, or assuming that the environment is the same throughout, for example everywhere is sheltered, or has no other function(s) for example, an open space simply exists as an open space as opposed to a basketball court or car park. Upon further reflection, there are a few things that could have been done in order to improve on the space syntax analysis in this research. One notable improvement would be to incorporate the linking of two floors through the public liminal spaces such as lifts, or staircases. This may account for the discrepancies of people recorded in the lift lobbies in floorplan(s) of the new CC building (Turner, 2004; Pinelo and Turner, 2010). In order to have a more comprehensive and accurate analysis by space syntax, this research suggests that the static snapshot method could be carried out over a longer period of time such as over a period of three months. This data is then suggested by Turner (n.d.) to be digitised on another software such as MapInfo, and subsequently imported into DepthMapX to compare their summary statistics, scatter plots and their correlation. This suggested improvement would then be able to give a more accurate



pattern of spatial use in the neighbourhood, it will also enable a more accurate account of the anomalies between the observation data and the analysis of space by the software.

Despite the improvements suggested, the basic space syntax analysis used in this research does shed some truth that high visibility and easy orientability makes a space in the neighbourhood or building more accessible. Planning an intergenerational space with high visibility and easy orientability thus enables more people to access the particular space more unconsciously and instinctively. This will ultimately create more awareness about the space when there are events and activities catered for different generations. From the space syntax analysis, Tiong Bahru Market was shown to be the most accessible spot in the neighbourhood. Thus, it was not just a functional space for the residents, it is also an essential node of social life in the neighbourhood (Mele et al., 2015) during the time it's open. Not only are intergenerational relationships formed within, but also holding an intergenerational event(s) within the market or near by, e.g. the bi-annual flea market, would create more awareness and thus enable a higher chance of drawing people from different generations to the event(s).

Hence, this reflection on the basic three space syntax analyses carried out in this research shows that space syntax can contribute to intergenerational space planning in future for the following purposes: 1) planning the most visible and orientable location(s) possible for intergenerational public spaces in the neighbourhood; and 2) to plan where intergenerational events can be held for most awareness and to attract the most people. By planning intergenerational public spaces based on either one, or both, it aligns with Kaplan et al.'s (2007) third and fourth steps on designing intergenerational spaces discussed in section 2.4.3, where space supports unintentional intergenerational encounters, and also has environmental factors that enhances the meeting of the generations. Further research employing the use of space syntax to plan for better intergenerational spaces should most likely consider the improvements suggested in this section in order to present a more comprehensive and accurate account of the anomalies between the static snapshot data and the space syntax analysis.

## 9.2 Future Research

While conducting the research, it was evident that a group of elderly- the disabled elderly- has been left out of this research mainly because they were not present at the events that were observed. Wong and Verbrugge (2009) have shown that disabled elderly experience physical limitations, they do not go out of their homes often in order to minimise their injuries or fatigue. This may be a factor that limits their social networks. Future research can thus specifically focus on the disabled elderly, how they negotiate their neighbourhood environments, and how they will be able to benefit from and contribute to the intergenerational narrative in the community scale. Space syntax analysis can also be implemented as a form of objective analysis to design spaces that are inclusive for the disabled elderly (Karimi, 2012). Another group of elderly to focus on can be the elderly who are living alone or independently as research has shown that living alone will increase the chance of social isolation, which then increases the negative impacts on physical health, mental health and vulnerability due to the small social networks (Donaldson et al., 2015; Thang and Lim, 2012; Wong and Verbrugge, 2009).

From the research, it is also evident that there is an ‘intergenerational gulf’ in terms of the community activity in the neighbourhood (Pain, 2005)- where the elderly demographic are more active in terms of contributing to their neighbourhood, excluding youths and children. Future research can thus contribute to intergenerational literature by exploring the reasons behind the intergenerational gulf, and subsequently providing solutions to include the younger generations to participate in and contribute to neighbourhood activities and events. Lastly, another contribution towards literature in ageing geography could be exploring the effects of technology, its age-appropriateness and how it could help elderly negotiate through space.

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## Appendix A: Sample Field Notes from Observation Walk and Participant Observation

25 March 2017 Saturday

### Morning

During my observation, I noticed a group of elderly who were doing *taichi* at the Seng Poh Garden. Perhaps I stuck out like a sore thumb but they looked at me as I was walking past and recording my static snapshot. Very soon after, they were dismissed and they bunched up in their own cliques and went on their separate ways. As I progressed on during my observation collection, I realised that there were a bunch of elderly who were walking with me. One of the men came up to me and started chatting with me- the conversation is as follows:

Him: 小妹, 那么早你在干什么? 要去工作吗?

(What are you doing here so early little girl? Are you going to work?)

Me: 不是, 我在这里做我的作业。你刚刚打完太极吗?

(No, I am here to do my assignment. Did you just finish the *taichi* class?)

Him: 对, 我是从中国的 (Name of *taichi* sect that I did not catch) 学了我的太极的。哦做作业啊, 很好啊! 你几岁了?

(Yes I did, I learnt my tai chi from a sect in China. Wow, doing your work, that is good that you are so hardworking. How old are you?)

Me: 我 26 岁了。你呢?

(I am 26 years old. What about you?)

Him: 你猜我几岁呢?

(Guess how old I am.)

Me: 七十多岁?

(70 plus years old?)

Him: 没有啦! 我九十多岁了。

(No way! I am already 90-something)

Me: 哇, 我真的看不出。。。

(Wow, I can't tell)

Him: Uncle 在 Lim Yew Hock 的时候已经开始住 Tiong Bahru 了。你知道 Lim Yew Hock 是谁吗?

(I was living here since the time when Lim Yew Hock was in charge. Do you know who Lim Yew Hock is?)

Me: 知道。 卖 Christmas Island 的那个。。。。

(Yes I do. It was the man who sold away Christmas Island).

While I could not remember the rest of our conversation but shortly after our short conversation, he subsequently crossed the road to join his friends. I suppose because I looked young, he thought that I could not understand any dialect and loudly (the fact that I could hear him from across the road) told his friends that he was talking to me and what I was doing in the early hours in Tiong Bahru.

While I was walking around doing the static snapshot method, there was also a temporary fruit stall that was set up next to a hardware stall who have been in Tiong Bahru for a long time. And then many elderly brought their own chairs to sit and chat among themselves, and with the store owner. Another observation while walking around Tiong Bahru was that many elderly also used quasi-public/ private spaces (coffeeshops where you have to pay to sit down) to mingle with their friends, or have an early breakfast with their family members.

### **Afternoon**

The afternoon crowd differed from the morning crowd. The number of elderly diminished and there were many young people, and hipsters (non Tiong Bahru residents), as well as expats and foreigners who were frequenting the cafes. The coffee shops were all ready to close for the day.

### **Evening**

As evening comes, the Tiong Bahru scene changed again. There were many restaurants and the carpark at Golden Spoon and Porkee restaurant were filled with cars, such that I was unable to stand on a similar spot to observe both sides of the carpark. Instead, I have to walk to each side to make an observation. Interestingly when these restaurants come alive at night such as Ting Heng Seafood restaurant, the public spaces can be converted to private- a chess table that is public was converted to being part of the restaurant- the restaurant puts all its plates on the chess table.

Another interesting observation is that there were tourists who were trying to capture picture of a door in one of the conserved buildings. When an elderly man walked past with his walking stick, and saw the camera, he immediately shielded his face as the tourists were still aiming to shoot the unique architecture. It seemed like they were so focused on their photoshoot that they did not notice the elderly man's discomfort.

### **28 March 2017 Tuesday, Karaoke Night**

I was really excited for Karaoke Night because I really love karaoke in general. Although I was suspecting that most of the people attending were the elderly and I expected them to sing oldies, I was extremely confident that I would be able to at least sing one or two songs because I grew up on singing English, Cantonese and Mandarin oldies with my parents in their car. When I reached the facility early (since I had nowhere more to go after my observation walk ended at 7 p.m.), I could hear that some people had started singing their songs before the karaoke session has started. When I walked closer to peep at what they were singing, I did not recognise the song, and on the TV screen, it reflected that it was a Chinese Opera song (to my horror at that point). However, I convinced myself that there will be definitely a song I know how to sing from the Karaoke CDs that were available. As I was standing outside the door of the RC, my fears and slight embarrassment in being a young person to join them singing Chinese Opera songs were confirmed when 2 young couples (who were about my age) walked past and peered in, and then discussed what was happening. After discussing, they said, "Karaoke", sniggered at the songs and continued walking. After seeing their snigger, I really felt mortified and wondered what I was doing there in the Karaoke Session. I saw A and B, whom I am somewhat acquainted with, and I went over and said hi to A. As A was busy with arranging the chicken lights, A just said hi, and told me that there were people doing *Qigong/ Taichi* in Seng Poh Garden. I sat there till it was about time for the karaoke session to start.





Picture 4 shows a few people conducting an evening *taichi* session.

As I entered, I passed A the candy and snacks that I bought in order to thank them. Although A initially rejected, A took it and thanked me on the elderly's behalf in the end. We did this while standing around the table of food. A then introduced me to the people who were around. Most of them were ladies and they were serving food. And according to A, they made/ cooked or bought the food themselves and on their own accord. There was a sweet dessert drink with jelly inside, cakes and pies. There were probably more food that was on the table but I was already overwhelmed by the lovely meal that the community has prepared for each other. As I was probably eyeing longingly at the food, they offered me the food. A told me that the karaoke session was special to the RC and that other RCs would expect those who attend to pay a small sum. A also added on that other RCs can be very political, and told me to explore other RCs, IF I am even able to be allowed into their events.

As I was still feeling slightly shy, I grabbed my food and sat at a corner and bobbing my head to the music when others are singing. A must have saw that I was feeling slightly lost, and she then dragged me to introduce me to the women who gave me food at first- that I was a researcher and I was here to do my research on the elderly in Tiong Bahru. But I hastily added in that I really wanted to have fun with them tonight and not be interviewing anyone because it would be an absolute wet blanket if I were to interview anyone while they were trying to sing along with the songs, or with their friends. Because of the introduction, they became

extremely friendly towards me, and they started to ask me more about myself. One lady who saw that these ladies became friendly towards me started to pass the the CDs in order for me to select my songs. The song names were printed on the CDs, and I was supposed to select the songs I know. After flipping through the book of CDs, I was unable to find a single song title that I know. So I simply left the book of CDs as that, continued eating and sat there smiling at anyone who was passing by me. The lady who passed me the book of CDs suddenly asked me why have I not chosen my song yet, and I replied that I do not know any of the song names. But she was unconvinced. The same 2 ladies whom I was conversing with earlier then started to tell the lady that I obviously would not know how to sing any cantonese songs, but that I would at least know how to sing the Mandarin songs. The lady who gave me the CD books realised that I was part of the younger generation who is unable to converse in dialect, and subsequently showed me a few CDs that had Mandarin songs. To my horror, I could not find a single song that I know. Somehow it seemed like A caught on to the situation, and told me that there were english songs next to the karaoke station. I was relieved and I went to the stack of CDs next to the karaoke station to attempt to search for some english songs. I tried gingerly flipping around the stack of CDS and found no english songs. C, who was manning the karaoke station must have heard me flipping around and asked brashly what was I searching for. I told him that I was wondering if there was any english songs there. C snapped at me, and brushed me away by telling me that there was so no such things as english songs here, and that if I wanted to sing any english songs, I should have brought my own CDs. I was taken aback, felt slightly dejected and decided that I wouldn't pursue my search for songs any further. When I was walking back to my seat, I was wondering to myself where would I even find Karaoke CDs in the first place. I never knew that there was such a thing. Or even if I did, the places where my father used to purchase them from (Carrefour Hypermarket) would have stopped selling them, and Carrefour Hypermarket has pulled out of Singapore from a long time ago.

So when I returned back to my seat, I just sat around and pretended to bob along to the music again. I also engaged in conversation with the ladies who were friendly towards me. I told them I was studying in Finland, and studying Urban Geography. They were telling me that it is an important subject and that they know their niece who was studied some kind of economics in Australia came back to Singapore with a really great job. The lady who asked me to pick a song finished singing a few songs, came back to our group and asked me to

choose a song again. I guiltily told her that I really did not know any of the songs in the CD bag, and that I was really sorry. She insisted that it cannot be that I know none of the songs, and that I have to know at least one. Then the two ladies told her that I must only sing in Mandarin because the younger generation does not know any Cantonese music. I said that I do know some Cantonese songs because my parents used to play the Cantonese music while they were driving in their car, and suggested that perhaps I do not recognise the song names but I would recognise the songs eventually. They seemed happy with that suggestion. However they once again asked me which songs do I know that was in the CD bag. I felt extremely guilty that I knew nothing so in the end, I picked up a song “叶亮代表我的心” which is a really famous Mandarin song, except that it has a typo error on the song name. I told the lady that I knew how to sing this song. However due to the typo, or perhaps illiteracy on the simple Chinese characters, I saw her furrowing her brows, and pondering on the song name for a really long time. While she was furrowing her brows, I told her a few times that it was simply a typo error. However, as I was unable to express myself in Mandarin, she kept insisting that it was definitely not a mistake and that I would not be able to sing it. We bickered back and forth on this point for a while, but as she was adamant, I decided that it would be best to listen to her, least I make a fool out of myself. Subsequently, I sat there a little while more, this time feeling a little conscious that I have not sung anything because I did not know any songs. Everyone was starting to ask me what song do I know how to sing, and I felt extremely guilty that I knew nothing. But they would not take that for an answer. The only people who seemed to understand was D and his/ her partner, E, who told the others that maybe I just did not know the song. I noticed that they did not sing too even when pressured to sing. They just sat there, smiled and rejected the mike.

While the others were singing, A passed me a disc and told me, “These songs are more popular.” As the Disc cover looked more modern, I gladly took the disc with a smile, only to flip to the back of the song list and realise, to my horror, that once again, I recognise none of the songs, and I did not even recognise the artist that was featured on the cover. At that moment I really wished that I was not there to disrupt their karaoke session. After one of the ladies finished singing, she came back to me and asked me what songs have I picked. In my confused state, I told them that I would sing whichever song that was picked out for me, as long as they would let me hear how the first half of the songs go. They were very delighted to

hear that, and started picking out all the songs. And when the others have finished their turn, it was my turn to sing. As I was the only youngster there, it felt like all eyes were on me when I sing. Apparently I got the stage fright, and only the lady who was singing with me, was singing. I then passed the mike on to someone else who knew the song better. After that failed attempt, we tried a few more attempts to sing. There was one song that came up and it has the 1970s vibe, with a female singer in the middle in a grand gown, and a few couples who were dancing in front of the stage. It seemed to be really hard to sing, and it seemed that my partner could not hit the notes, saw that I was completely clueless and tripping over words, she told the old man manning the next station to change to the next song. And then she turned to me, and told me, "I bet you will know this song." Feeling defeated, I just nodded along and doubted her internally. The MV setting was exactly the same as the previous song and I felt myself not knowing it at all. But a little more through the song, I felt like I have heard the tune before and went "OH I HAVE HEARD OF THIS" rather loudly. To my dismay, the song cuts off to a more unfamiliar tune and I felt lost again. It was then time to sing, but due to my previous confidence I was more inclined to sing something so my voice was actually heard. However, it was clear that I got the tune wrong. Despite that, some of the adults started clapping for me and said they finally heard my singing voice. As with the mandarin music from the older days, there were many interludes with "ahhhhhhh~" inside. Even though the lyrics was deceptively easy, as I did not know the tune, I kept going off tune with every "ahhhhh" I did. While singing the song, B (whom I was acquainted with from the previous coffee corner) and F came in. Then B sort of danced along when I was singing. I smiled and tried dancing along stiffly. F was staring curiously at me. As it was a fairly famous tune, the C turned around from his seat and grumbled under his breath that I was singing the song wrongly. When the song was about to end, he further grumbled, something along the lines that not only do I not know how to speak in Cantonese or Mandarin, but I also mess up the song. Either C must have said it loudly, or I was mildly appalled by the comment, the lady whom I was singing with tried to mediate the situation by smiling and said that, "C loves music so much, C just has to correct everyone who sings the songs wrongly. Once you sing something wrongly, C will let you know, good isn't it?" I just smiled and nodded my head at her, not wanting to show that I was feeling appalled by his comments. There was another song that came up, this time it was a blur. Again, I did not know the song, so I asked if I could listen to it halfway and sing it instead. However, I was told that if I have to sing, I would sing the whole song, and I am not allowed to sing the song halfway. So I tried my best to sing the

songs, with the support of the ladies who were sitting near me (they were singing the song loudly as well) so I tried to sing along with them.

After three songs, we took a break and I continued to grab more cakes from the food table. As I was sitting there, A came up and talk to me again. A was standing up and I was sitting down. As I was sitting down, I peeped behind the partition that I was leaning and saw that there were people folding ‘origami’. When A noted my interest in their paper folding, A told me that they were folding for the flea market, and A dragged G (who was singing many of the karaoke songs), introduced me to G, and told me that G is really talented in folding origami and has folded many as decorations for the RC, especially during Chinese New Year and Mid-Autumn Festival. I commended her that it is really pretty and it has been a while since I have met someone who folded all these. However more songs came on and the it was the song that the lady picked so she excused herself and went to sing the songs that she has chosen. A and I also stopped our conversation for a while, and listened to the people who were singing songs.

There was a Hokkien song that came on, and everyone was singing it very enthusiastically. The MV showed a China city, and it could be a joke song as there were a lot of ‘funny’ noises (akin to barking) in between the songs, and that got most of the people who were there hyped up. Most people were laughing and making the funny noises while the 2 singers were singing. The lady who was singing with me, turned to me to tell me that that was a Hokkien song. I said that I knew. She subsequently asked me if I knew any Hokkien, and I told her that is one dialect that I unfortunately do not understand. I told her that as my mother is Cantonese and my father is Teochew, I roughly understand these two dialects although I do not speak in them. I subsequently asked her if she is Cantonese and she replied that she is, and she does not understand the song that they are currently singing. She also said that she was never really into Hokkien songs. As the night progressed on, there were more Hokkien songs. And the group of ladies who took care of me were also enthusiastically singing their songs in Hokkien. It was during the Hokkien songs where the lady who sung with me asked me if I wanted to sing another song. Once again, as I did not know what to sing, I looked absolutely confused. She then launched into a discussion with the rest of the ladies, and they all agreed, and was somehow certain that I knew how to sing the song “女人花” by a famous Hong Kong singer, Anita Mui. Their reasoning was that it was because it was a Mandarin song (one of the only

ones they had). While I know the singer because it was my mum's favourite, I was certain that I have never heard a Mandarin song from Anita Mui, since I have only listened to her cantonese album. As I sang halfway, I probably had the tune wrong (as usual), and G seemed like G was getting into the song enthusiastically. During the song interlude, I passed G the mike and said G should sing because she had a great voice. Initially, G strongly rejected me, but later on she took the mike to sing. It seemed like she was singing to her heart's content. However, it could be perhaps my actions have some repercussions, and may have not been pleasing to my singing partner as she did not exude the same warmth and did not seem to be interested to converse with me any longer. In retrospect, my actions of passing the mike on could have seemed rude since I was told there was "no such thing as singing halfway", especially also because she has chosen the song for me. However, when I go to Karaoke with my friends in a Karaoke joint, passing the mike on was something that was considered polite and considerate. I should have been more aware of the social nuances then.

Somewhere towards the end, the husband of the lady who sung with me came into the karaoke session. She was very happy. And he chose the cantonese song "七个老婆" (7 wives) to sing with his wife. It was an upbeat and funny song, and certainly resulted in a lot of jokes being thrown at the couple, about how he desired 7 wives, and she scolded him in mock anger. As these jokes all happened in Cantonese, some of the men (who were RC members) was shocked that I was laughing along, almost wondering why did I know Cantonese. It was also around the end of the 7 wives cantonese song that signified almost the end of the night. Most people were taking turns to go to the WC as the rest were still singing their songs. It was then E came to tell me that if I needed to go to the WC, there is one within the facility. However, I did not feel the need to go so I said that I really did not need to go. E then told me that I have a long journey home, since I live considerably far from the estate, but I told E that I could perhaps control on the bus ride home should the need comes up. It was then E commented that it was only the young who could do such things i.e. not urinate as much as the elderly. I did not know how to respond so I just said that I did not drink very much to begin with.

It was some where towards the end where there were 3 other ladies who came into the RC. A then told me that these 3 ladies was from a different RC and came in there just to enjoy themselves since it is a free event. She told me that their RC did not offer such things as a free

karaoke. To further illustrate A's point on how close the RC is, A pulled out her phone and showed me pictures of the RC members traveling together to a "kelong" (house above the water, usually for fishermen) in Malaysia. First, A told me that the Kelong is a beautiful place, and she did not expect it to be so modern. When A showed me the picture of the 'kelong', I was shocked because I expect it to be a stilt wooden house and not something built of concrete. And then A moved on to tell me that it has been a long time since A went and the last time A went A was not impressed. But she said that it was really impressive now and worth a visit. A also told me about the various transport options to get to that "kelong" in Malaysia, and subsequently added that A is not trying to sell anything about the location or anything of that sort. A moved on to show me pictures of the people in the RC having fun, and how they even played with fireworks at night, and were allowed to release light lanterns into the air by the owner. A said that A missed playing with fireworks because that was what A played with as a child but just never had the chance to play with it anymore since it was banned in Singapore. We stopped for a while, and listened to the others sing one more song. And then, people started to stand up and placed back their chairs, and the C also got up to go to the toilet. A then asked me if I enjoyed myself. And I told A that I really did and everyone was very warm and kind. Upon hearing my response, A said A was glad to see me enjoying myself, and also added on with the fact that not every RC is like that and has such a warm community like Seng Poh's. A also told me that the C does not stay in Tiong Bahru, but has moved out a long time ago, and that C came back because C loves the community and C loves music. A then added on to say that A knows C can be a nasty character and unpleasant man because C used to live two stories below her block and has a reputation but the RC needs to have someone to man the karaoke booth because F (who was quite chirpy, sings hokkien songs, and relatively younger songs) usually has to work overtime. A said because of that, A has learnt to put her differences aside and to accept him for who he is, and try to get the community to work with him. During this part, everyone started doing the final pack up, and it was apparently one last song. I guess I must have looked happy while doing so because D came up to me and said, "Wow, young girl enjoyed the karaoke with us ah..." I just said, "Yeah" because it seems that everyone was hurriedly trying to place everything back to its original position. After doing so, everyone stood up and sang the last song together, in a very happy manner, almost like a choir. A then came up to me to send me off with her well wishes. We were joined by F who came over and said hi to me. When A told F I was doing a project work, F was extremely friendly and asked why did I not take a video of all of them

singing? I laughed and said it was not too ethical to get their faces in, and F jokingly said that F wanted to get in a video. As everyone was packing up and leaving, they bode farewell to me and wished me the best of luck for my thesis. It was then I saw E, E smiled and came forward to me and handed me a bag of biscuits from the bakery, told me to bring it home because it would be wasted anyway. I tried bidding farewell to the elderly lady that I sung with but she still remained relatively cold towards me so I left it as such. Everyone was really chatty and in high spirits when they were going home. I then made my own way back to the bus stop.



## Appendix B: Sample Interview with Lana

It is crucial to note that Lana is a pseudonym, and details that can be used to identify who Lana is, such as, the years she stayed in Tiong Bahru, her job before retirement, have also been deleted away in this sample interview. The information changes will be placed in these parentheses, [ ]. As the participant did not allow the interview to be audio-recorded, and the contents of the interview was recorded in a notebook. This interview was conducted in Mandarin, and recorded in the notebook in English.

| Speaker | Transcription: 24 March 2017                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| I       | When did you start to live in Tiong Bahru?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| L       | I lived in Tiong Bahru after the war. The unit that my family lived in is one of the flats with the sharp roof. Do you know the flats with the sharp roof?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| I       | No, I am not aware of them.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| L       | If you go outside, you will see that there are flats with the sharp roof, and you will see that there are flats with the flat top above. So as I was saying, I was born with the flats with the sharp roof ahead. These flats are the first flats built after the war. They are built in 1948. So to answer your question, I have stayed in Tiong Bahru from 19[XX] to 2017. I guess even though we were considered somewhat rich since we could afford to live in these SIT flats in Tiong Bahru, it does not mean that we have it all. There was about 10 people who were living in our apartment, and I have to stay at the staircase. However during the 1950s, my brother bought a house in Hong Kong, and then subsequently transferred the house under my name. In 19[XX], I eventually bought the house down under my name. |
| I       | Wait, I am a little confused, why is it that you brother transferred the house under your name in the 1950s but you only bought it down in 1972?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| Speaker | Transcription: 24 March 2017                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| L       | That is because I became [30+] that year. And if you are single, you can only purchase the house at 35 years old. During those times, 1 unit of the house was \$20,000. As a teacher, I have the purchasing power to buy the house. So it was that period where our family owned 2 units here in Tiong Bahru. I stayed in Block 49 with my mother till she passed on in 19[XX]. And my younger brother stayed in Block [XX]. However, he moved away 3 years ago to [the west of Singapore] to live with his younger children.                                                           |
| I       | Yeah, I guess it happens when people have children, they would want to live with their children.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| L       | (Lana nods her head)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| I       | So you are living alone now?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| L       | Yeah.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| I       | How do you feel about living alone? Like do you feel lonely?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| L       | No, I do not feel lonely when I live alone. One has to live a life with principles and live to it. You cannot live a life without any principles. As for loneliness, it is just dependent on how you organise your time. I think I have led a fulfilling life since 19[XX]. So I am [above 65], going to [turn one year older] this year. I think I have [above 65] years of my life well spent because I have principles. Also, after my retirement in 19[XX], I gave my full commitment to the resident's committee here so I don't really feel lonely even though I am living alone. |
| I       | I am just curious, why did you choose to join the RC?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| L       | Why I joined the RC? Oh that is such a long story you know. I actually joined the RC a long time ago because of a sudden opportunity. When I was walking, I saw a poster asking for volunteers to join the RC. At that time, there were two RCs- Kim Pong and Seng Poh.                                                                                                                                                                                                                                                                                                                 |
| I       | Oh, wow, I did not know that.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Speaker | Transcription: 24 March 2017                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| L       | <p>Yes, later on, the two RCs- Kim Pong and Seng Poh then merged to become 1 RC, which is now the Seng Poh RC. Anyway, as I was reading the poster for the Kim Pong RC, it so happened that the Kim Pong RC's president saw me, and approached me to join the RC. He asked me, "Why don't you try joining the RC?" At that time, I thought it would be cool to join because I was thinking of retiring soon. I thought being a RC member was easy you know, all I thought I had to do was just join to become a member and that was all. But of course, fate has it's own way of working, so my life as a RC member was not that easy. When I joined the RC, most of the members in the RC are Chinese educated, but unfortunately, our secretary is from the english education system. So my job in the committee was to [help translate] since I could speak both english and mandarin.</p> |
| I       | <p>How did they know you were bilingual?</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| L       | <p>Well, first, I am not bilingual. I am just able to speak english better than those who were from the Chinese education. And they knew that I have a basic grasp of the English language because the member of Parliament (MP) at that time used to study in the same secondary school as me. He then went on to study in [a Singaporean University]. Both of us were from [a Singaporean] Secondary School. Do you know of that school?</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| I       | <p>Yes, I do, in fact I know of a few people who came from that school.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| L       | <p>Anyway, he knew that I could speak english so he told the president of the RC and thus they kept offering me the job to [take on the position]. Although I kept rejecting the job, they kept putting it on me to [the position].</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| I       | <p>Why did you reject the position?</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| L       | <p>Well, I am not sure how to translate.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| I       | <p>But your language...</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| Speaker | Transcription: 24 March 2017                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| L       | <p>Yes, my english may not be bad, but translating the main points is an entirely different thing and requires a higher skill set than I possess. I did it in the end, I guess you could say that I am forced to be [the position] in the end. When the chairman resigned, and they merged into Seng Poh RC, everyone spoke english and I did not have to [continue the job I did]. Eventually, they did ask me to remain as [the position] still. In the end, I felt forced to be [in that position] that I wrote in a letter to resign. When I did that, they said they really wanted me to continue on. I told them that in that case, I would just [help out] and I do not want to do [that position] anymore. I continued mainly because of low numbers of members in the RC. I just did not want to do [work in that position] anymore, any other kind of work is fine since there is a good relationship among the RC members.</p> <p>(L also talked about the relationship between older and younger members in the RC, but she requested that section to be taken out of this interview).</p> |
| I       | <p>Do you interact with your neighbours outside of [helping the RC]? Especially people who are of different age group from you?</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| Speaker | Transcription: 24 March 2017                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| L       | Yes I do. Like for example, just before I came for this event, it's not because I am late or anything. I am never the kind to be late ok, don't have a bad impression of me just because I came late. I just had to attend to something because I just came from helping my neighbour to take care of her mother. I bumped into my younger neighbour while walking here. I asked her how is her mother doing, and she replied that her mother was not doing very well. You know actually she was fine until her husband passed away, and then she just becomes isolated and refuse to talk to anyone. I think that is partly because she did not really mingle with anyone in the community, but just solely stuck to her husband. That's why when people asked me if staying alone and if I mind not being married, I like it very much because then I get to focus on myself and my wellbeing. Anyway, since I felt that she is rather isolated due to the death of her husband, you know, she does not even change her clothes, I have offered her children that they can come to me if they need any help taking care of their mother. Any more questions? |
| I       | What is your routine in this neighbourhood?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| L       | My daily living usually revolves around the RC. Just last week, I went out with my ex-colleagues from the school I used to teach,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| I       | Oh wow, you are still in contact with your ex-colleague?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| L       | Yeah I have a really good relationship with my the ex-teachers from my school who have retired as well. She is an english teacher. Surprisingly as a [subject] teacher, my good friends from my ex-school are always with the [subject] teachers.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| I       | How did that happen?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| L       | My father just brought my whole family up that way. When I was young, so many people laughed at me and my family and said that we love the West too much.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| I       | 崇洋 (no direct translation, but the gist is that the person is an anglophile, or has an overwhelming love or respect for the 'western' culture) is it?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| L       | Yes, exactly, that is what they called me.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Speaker | Transcription: 24 March 2017                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| I       | Yeah, I completely understand, that is what my mum calls me too.                                                                                                                                                                                                                                                                                                                                                                                                               |
| L       | Yeah but why should we care how people view us right? It is not like we are harming anyone, and there is no harm in learning something new. I just have a different upbringing because my father is focused on the family expanding our knowledge about the world. But I am not good in speaking English at all, just a basic knowledge. I definitely prefer speaking in Mandarin, and don't understand why the younger generation these days are unable to speak in Mandarin! |
| I       | No, no, that is not true, I would not have guessed you were from the Chinese education at all when you were speaking in English. Your pronunciation is perfect, and way better than most people these days.                                                                                                                                                                                                                                                                    |
| L       | Well, I am just raised in a way that is more westernised than how most people in my generation would have been raised. One example can be seen how I am with my nieces and nephews. I allow them to hug me when they see me and ask how I am, unlike how most Chinese aunties or grandmothers would not allow their descendant to do so.                                                                                                                                       |
| I       | What do you usually do during your free time now that you have retired?                                                                                                                                                                                                                                                                                                                                                                                                        |
| L       | I like to go everywhere. Travel is my passion. I have been to many places before.                                                                                                                                                                                                                                                                                                                                                                                              |
| I       | Where have you been?                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| L       | Just clarifying- I am not bragging when I say how many countries I have been to. People usually think I am. I have been to Eastern Europe, Middle East- before the war, Western Europe, India- 3 times, Nepal, Russia, England- 2 times, China, 东北- 2 times, Japan, and I even travelled the Silk Road.                                                                                                                                                                        |
| I       | Oh wow, that is absolutely amazing and I have always wanted to travel the silk road. Who do you usually travel with?                                                                                                                                                                                                                                                                                                                                                           |

| Speaker | Transcription: 24 March 2017                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| L       | <p>Different people- I usually travel with friends. You know, things were different back then and it wasn't as convenient as how it is to travel now. Back in 1984, which is my first time to China, I have to go through Hong Kong before I could enter China. Unlike now, where you can access China so easily. But I am glad I went there in the past because there is just too many people now. In China, I went to the Hakka Village (围村). Have you heard of it before? Yeah, to get there, I have to go past 潮州.</p> <p>(There were more stories about her travels but I did not jot them down during the interview. At this point, other [people who present in the RC at that time] have come in to see if we have finished our interview.)</p> <p>So I think the most important thing as a person- to attain happiness, you cannot be too calculative, otherwise you won't be happy. Oops, I think I got a little carried away with my stories. Please ask other questions if you have them.</p> |
| I       | How are your interactions with neighbours?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| L       | <p>I smile at my neighbours when I walk past them usually. After a period of smiling and interacting briefly with your neighbours, you would eventually get to know them. Also, because I am [helping out with the RC], so I get the added advantage of inviting neighbours out to all these events, and also meeting new neighbours in these events like today's coffee corner is new, and then I also attend the Rammy O- mahjong. Any more questions?</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| I       | What about neighbours of other ages?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| L       | <p>I am also friendly with the younger neighbours. We even call each other by name. And they would call me aunty as a sign of respect. Also, as I was saying the reason that I came late just now, I actually know the daughter and son before I know the mother and started to help take care of the mother. We must always respect our mothers. You must remember to be filial to your mother, all right? I think I have to go now. It was nice meeting you and I hope I can come visit Finland one day.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## Appendix C: List of In-vivo codes

This section presents a list of in-vivo codes that was formulated during the first step of the coding analysis. These codes are then merged, or eliminated later on during the final stage of coding, as presented in Table 3 (Chapter 4). This table is generated by the software Atlas.ti.

| Name                   | Groundedness | Comment                                                                                                              |
|------------------------|--------------|----------------------------------------------------------------------------------------------------------------------|
| Accessibility          | 7            | When interviewees state how easy it is for them to access spaces and places, both within and outside of Tiong Bahru. |
| activities             | 31           | The activities that were (not) available for the residents.                                                          |
| Aging population in SG | 13           | Mention of elderly demographics, and living conditions both in Tiong Bahru and Singapore.                            |
| alone                  | 11           | Describes theirs', or others' living situation, or daily routines.                                                   |
| ambience               | 3            | Describes the living environment in Tiong Bahru.                                                                     |
| Bird Corner            | 4            | A public neighbourhood space/ place in Tiong Bahru.                                                                  |
| bonding                | 26           | Describes the interactions and building of relationships between the residents in Tiong Bahru.                       |
| Bus Shelter            | 6            | A public neighbourhood space/ place in Tiong Bahru.                                                                  |
| by myself              | 2            |                                                                                                                      |
| by yourself            | 1            |                                                                                                                      |
| cafes                  | 10           | Refers to cafes (quasi-private space) that are setup by business people.                                             |
| clashes and tensions   | 15           | The conflicts, and tensions within the neighbourhood.                                                                |
| Coffeeshops            | 9            | A public neighbourhood space/ place in Tiong Bahru.                                                                  |
| Comfortable            | 1            | Describes the environment in Tiong Bahru.                                                                            |
| community              | 54           | When people try to bond together through activities, a common interest, or location.                                 |
| Community Center       | 14           | A public neighbourhood space/ place in Tiong Bahru                                                                   |
| complain               | 15           | Refers to the complaints that were mentioned by the residents.                                                       |
| conserved              | 2            | Pros and Cons of Tiong Bahru's conserved status as a neighbourhood.                                                  |
| contribution           | 26           | Contributions to the neighbourhood.                                                                                  |
| corridors              | 19           | A public neighbourhood space/ place in Tiong Bahru.                                                                  |
| crowding point         | 3            | A space where the residents gather to socialise.                                                                     |
| Daily Routines         | 18           | The routines that residents carry out in their everyday lives.                                                       |



| Name                      | Groundedness | Comment                                                                                                                        |
|---------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------|
| events                    | 28           | The events that were organised, or facilitated for the residents.                                                              |
| expat                     | 18           | The expat community living in Tiong Bahru.                                                                                     |
| expats                    | 19           | The expat community living in Tiong Bahru.                                                                                     |
| Family                    | 12           | The relationship that participants describe they have with their family, or lack of.                                           |
| Fate                      | 3            | Eddy uses fate to describe his interaction with people, and how he ends up talking to his neighbours.                          |
| Flea Market               | 3            | A public neighbourhood space/ place in Tiong Bahru.                                                                            |
| foreign                   | 30           | Referring to non-Singaporeans either living in Tiong Bahru, or just visiting.                                                  |
| foreigners                | 29           | Referring to non-Singaporeans either living in Tiong Bahru, or just visiting.                                                  |
| Friendship                | 17           | When participants describe their relationship with their friends, or lack of.                                                  |
| Garden                    | 19           | A public neighbourhood space/ place in Tiong Bahru.                                                                            |
| hipster                   | 5            | Tiong Bahru is now known for its alternative or hipster vibe. Refers to the new wave of residents and visitors to Tiong Bahru. |
| I help them               | 1            | Describes the help and contribution that the elderly do for others.                                                            |
| intergenerational         | 41           | Describes the bonds and interactions between generations.                                                                      |
| L a n g u a g e Barrier   | 12           | Difficulties in communication                                                                                                  |
| Littering                 | 3            | Littering and dirtying of public space.                                                                                        |
| Livability in Tiong Bahru | 10           | Participants describe their experience of living in Tiong Bahru                                                                |
| loneliness                | 2            | Describes the emotions of the elderly who feels lonely.                                                                        |
| lonely                    | 5            | Describes the emotions of the elderly who feels lonely.                                                                        |
| Market                    | 13           | A public neighbourhood space/ place in Tiong Bahru.                                                                            |
| Mobility                  | 17           | Describes how mobile, or agile the elderly are in negotiating their environment.                                               |
| modern                    | 1            | Used to describe the modernisation and the urban regeneration in Tiong Bahru.                                                  |
| Multigenerational         | 25           | Describes how generations are within the same space/ place.                                                                    |
| Neighbours                | 46           | When participants describe their relationship with their neighbours, or lack of.                                               |
| next generations          | 13           | Describing the younger generations in Tiong Bahru.                                                                             |
| no lift                   | 12           | Lack of lifts for the elderly in the conserved estate.                                                                         |
| nothing to do             | 4            | Describes the lack of activities, usually in relation to loneliness.                                                           |

| Name                       | Groundedness | Comment                                                                                                                               |
|----------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------|
| participation              | 21           | Describes if the residents do participate in the events or activities that are available.                                             |
| Playground                 | 2            | A public neighbourhood space/ place in Tiong Bahru.                                                                                   |
| playsets                   | 5            | A public neighbourhood space/ place in Tiong Bahru.                                                                                   |
| private                    | 1            | Describes the living environment in Tiong Bahru.                                                                                      |
| proximity                  | 0            | Describes a location in relation to others.                                                                                           |
| quiet                      | 2            | Describes the living environment in Tiong Bahru.                                                                                      |
| reachability               | 6            | Describes the ability of the RC and CC to reach the residents.                                                                        |
| rent                       | 8            | Describes both housing and shops' rental and how it affects residents and brings a new wave of residents and visitors to Tiong Bahru. |
| Restaurants                | 2            |                                                                                                                                       |
| Road                       | 9            |                                                                                                                                       |
| Routines in<br>Tiong Bahru | 6            | The routines that residents carry out in their daily lives within the Tiong Bahru neighbourhood.                                      |
| sense of<br>belonging      | 3            |                                                                                                                                       |
| sheltered                  | 17           | Describes the living environment in Tiong Bahru.                                                                                      |
| staircase                  | 9            | Lack of lifts for the elderly in the conserved estate.                                                                                |
| Territories                | 14           | Marking of territories by individuals or organisations.                                                                               |
| tourists                   | 6            | Referring to non-residents (usually non-Singaporeans) visiting Tiong Bahru.                                                           |
| Vandalism                  | 4            | Vandalism of public space and goods.                                                                                                  |